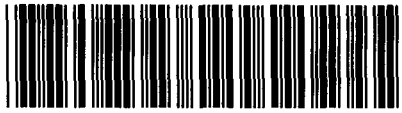

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Item Number: 420

Addendum StartPage: 0

SOAH DOCKET NO. 473-19-3864
PUC DOCKET NO. 49421

APPLICATION OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC FOR AUTHORITY TO CHANGE RATES	)	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

Direct Testimony and Exhibits of

Michael P. Gorman

On behalf of

Texas Industrial Energy Consumers

CONFIDENTIAL INFORMATION HAS BEEN REDACTED

June 6, 2019

BRUBAKER & ASSOCIATES, INC.

SOAH DOCKET NO. 473-19-3864
PUC DOCKET NO. 49421

APPLICATION OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC FOR AUTHORITY TO CHANGE RATES	)	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

Filename: MPG_DT

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SOAH DOCKET NO. 473-19-3864
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APPLICATION OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC FOR AUTHORITY TO CHANGE RATES	)	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

Affidavit of Michael P. Gorman

State of Missouri)
) **SS**
County of Saint Louis)

Michael P. Gorman, being first duly sworn, on his oath states:

1. My name is Michael P. Gorman. I am a Managing Principal with Brubaker & Associates, Inc., 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017. We have been retained by Texas Industrial Energy Consumers to testify in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and exhibits which were prepared in written form for introduction into evidence in Public Utility Commission of Texas Docket No. 49421.

3. I hereby swear and affirm that the testimony and exhibits are true and correct and that they show the matters and things that they purport to show.

Michael P. Gorman

Subscribed and sworn to before me this 6th day of June, 2019.

MARIA E. DECKER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis City
My Commission Expires: May 5, 2021
Commission # 13706793

Notary Public

SOAH DOCKET NO. 473-19-3864
PUC DOCKET NO. 49421

APPLICATION OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC FOR AUTHORITY TO CHANGE RATES	)	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

Direct Testimony of Michael P. Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q WHAT IS YOUR OCCUPATION?

A I am a consultant in the field of public utility regulation and a Managing Principal of Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A This information is included in Appendix A to this testimony.

Q ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A I am testifying on behalf of Texas Industrial Energy Consumers ("TIEC"). TIEC member companies own and operate industrial facilities in the CenterPoint Energy Houston Electric, LLC ("CEHE" or "Company") service territory.

Q WHAT IS THE SUBJECT MATTER OF YOUR TESTIMONY?

A My testimony will address the current market cost of equity, appropriate ratemaking capital structure, and resulting overall rate of return for CEHE. In my analyses, I consider the results of several market models, the current economic and capital market environment, and the market outlook for both regulated utility stocks and the overall stock market. I also consider CEHE's financial integrity, its credit metrics as impacted by the new federal tax law, and its capital program projections over the next several years.

My silence in regard to any issue should not be construed as an endorsement of CEHE's position.

I. SUMMARY

Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS AND CONCLUSIONS ON RETURN ON EQUITY.

A I recommend the Public Utility Commission of Texas (the "PUCT") award CEHE a return on common equity of 9.25%, which is the midpoint of my recommended range of 9.00% to 9.50%. My recommended return on equity will fairly compensate CEHE for its current market cost of common equity and mitigate CEHE's claimed revenue deficiency, while fairly balancing the interests of all stakeholders (investors and ratepayers).

Q PLEASE DESCRIBE YOUR ADJUSTMENT TO CEHE'S PROPOSED RATEMAKING CAPITAL STRUCTURE.

A I disagree with CEHE's proposal to adjust its ratemaking capital structure to increase its common equity ratio to 50% from the much lower equity ratios used in its last two

rate cases, which were 45% and 40%, respectively. CEHE's proposed change to its capital structure will unnecessarily and unjustifiably increase costs to ratepayers to support a more expensive overall rate of return and related income tax expense. CEHE's proposed capital structure is largely designed to support the credit metrics needed to support the credit rating of CEHE's parent company, CenterPoint Energy, Inc. ("CNP"), rather than CEHE's stand-alone credit rating. This is clear insofar as the target credit metrics relied on by CEHE to support increasing the equity ratio in its capital structure reflect credit rating metric benchmarks applicable to CNP's business and financial risk profile, rather than CEHE's business and finance risk profile. However, CEHE has lower business risk than CNP, and therefore can support its stand-alone bond rating at lower credit metric ratios compared to those needed to support CNP's bond rating. I rely on Standard & Poor's ("S&P's") benchmarks for this investment risk profile assessment.

From this standpoint, TIEC witness Charles Griffey has proposed that the Commission consider implementing or encouraging CEHE to adopt ring-fence separations from its parent CNP. Ring-fencing CEHE will lower costs to customers and support CEHE's credit rating based on financial credit metrics that more accurately reflect its stand-alone credit. Indeed, I show that these ring-fence separations, and the ability to set a ratemaking capital structure and achieve credit metric targets for CEHE on a stand-alone basis, will produce over a $104.1 million reduction in CEHE's cost of service. Therefore, separating CEHE's credit standing and ratemaking costs from CNP is prudent, reasonable, and necessary to produce just and reasonable rates for CEHE.

The impact of CEHE's affiliation risk with its parent CNP is demonstrated by CEHE's recent credit rating downgrade. As I discuss below, that downgrade was driven by CNP's financial decisions and the lack of adequate separation between the two entities. More specifically, CEHE's credit downgrade was motivated by CNP's

proposed leveraged acquisition of Vectren Corp., a utility company operating outside of the Electric Reliability Council of Texas ("ERCOT"). In fact, S&P explicitly noted the proposed leveraged financing structure as a reason for downgrading CNP, and that downgrade in turn caused a downgrade for CEHE. Accordingly, it is clear that separating CEHE's credit standing from its parent's could mitigate unnecessary cost increases for Texas retail customers while preserving CEHE's credit standing.

Q WILL YOU RESPOND TO CEHE'S RATE OF RETURN RECOMMENDATION?

A Yes. I demonstrate that CEHE witness Mr. Robert Hevert's recommended return on equity range of 10.00% to 10.75%, as well as his point estimate of 10.40%, are excessive and unreasonable, and should be rejected. I also respond to CEHE's capital structure proposal.

Based on my recommended return on equity of 9.25% and my proposed ratemaking capital structure consisting of a 40%/60% equity/debt ratio, I recommend that an overall rate of return is 6.33% be used to set CEHE's revenue requirement in this proceeding. This is shown on my Exhibit MPG-1.

II. RATE OF RETURN

Q PLEASE DESCRIBE THIS SECTION OF YOUR TESTIMONY.

A In this section of my testimony, I will explain the analysis I performed to determine a reasonable rate of return for CEHE in this proceeding and present the results of my analysis. I begin my estimate of a fair return on equity by reviewing the authorized returns approved by the regulatory commissions in various jurisdictions, and the market assessment of the regulated utility industry's investment risk, credit standing, and stock price performance. I used this information to get a sense of the market's perception of

the risk characteristics of regulated electric utility investments in general, which I then used to produce a refined estimate of the market's return requirement for assuming investment risk similar to CEHE's utility operations.

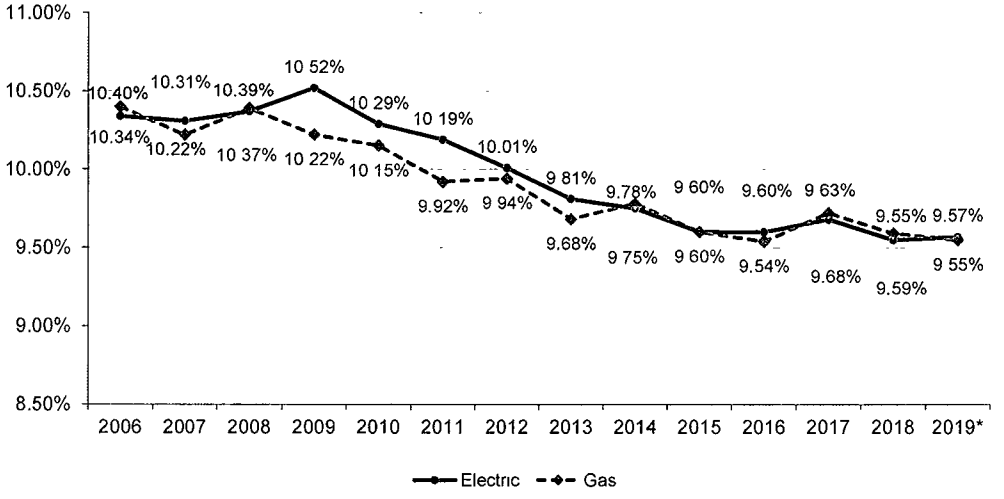
II.A. Utility Industry Authorized Returns on Equity, Access to Capital, and Credit Strength

Q PLEASE DESCRIBE THE OBSERVABLE EVIDENCE ON TRENDS IN AUTHORIZED RETURNS ON EQUITY FOR REGULATED UTILITIES.

A As illustrated in Figure 1 below, authorized returns on equity for both electric and gas utilities have declined over the last ten years, and have been reasonably stable around 9.6%.

FIGURE 1

Authorized Returns on Equity*
(Exclude Limited Issue Riders)



Source and Notes:
[1] *S&P Global Market Intelligence*, RRA Regulatory Focus, Major Rate Case Decisions -- January - March 2019, April 11, 2019 at pages 8 and 9.
* Data includes January - March, 2019.
* Electric Returns exclude Limited Issue Riders
* RRA excludes the 2017 Alaska ENSTAR decision from its calculations

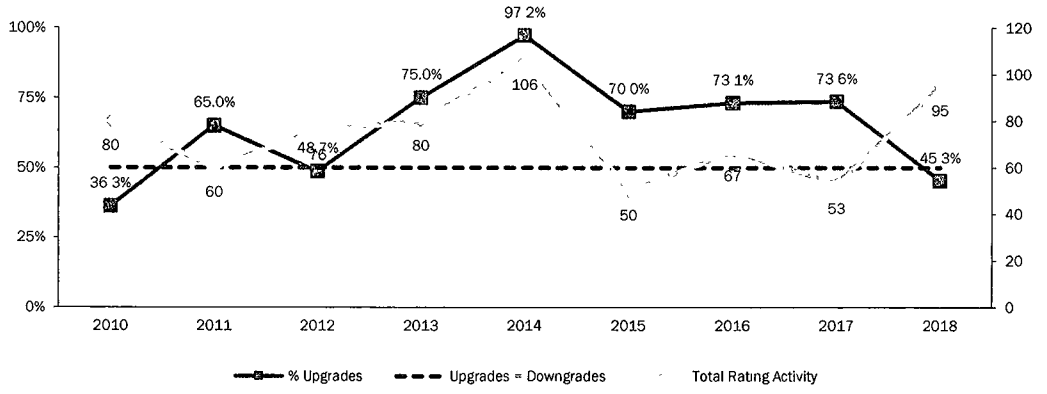
Q PLEASE DESCRIBE THE TREND IN CREDIT RATING CHANGES IN THE ELECTRIC UTILITY INDUSTRY OVER THE LAST SEVERAL YEARS.

A As shown in Figure 2 below, from 2010 through Q4 2018, the electric utility industry has experienced a significant number of credit rating upgrades from all of the major credit rating agencies (Fitch Ratings ("Fitch"), Moody's, and S&P).

FIGURE 2

Credit Rating Changes
(U.S. Investor Owned- Electric Utility Industry)

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Upgrades	29	39	37	60	103	35	49	39	43
Downgrades	51	21	39	20	3	15	18	14	52
% Upgrades	36.3%	65.0%	48.7%	75.0%	97 2%	70 0%	73 1%	73 6%	45 3%
Total Rating Activity	80	60	76	80	106	50	67	53	95
Upgrades = Downgrades	50%	50%	50%	50%	50%	50%	50%	50%	50%



Source EEI 2018 Q4 Credit Ratings. Tab IV Direction of Rating Action.

As shown in Figure 2, upgrades in utility credit ratings started outpacing downgrades in 2011 through 2017. For example, in 2014, there were 103 upgrades and only three downgrades. In 2015, the number of upgrades was more than twice the number of downgrades (35 upgrades and 15 downgrades). This trend was even more pronounced in 2016 and continued with data available for 2017. In 2018, the downgrades and upgrades were roughly split.

Q IS THERE REASON TO BELIEVE THAT THE CHANGE IN FEDERAL TAX LAW WILL INCREASE UTILITIES' COST OF EQUITY?

A No. For some utilities, the Tax Cuts and Jobs Act ("TCJA") will impact cash flows, but that impact is not significant enough to threaten the credit standing of the industry in general. Some utilities whose credit metrics were marginal to support their existing credit ratings were, or are, subject to a slight downgrade as a result of the TCJA.

More importantly, the TCJA will increase the after-tax return on a stock dividend payment. This increase in after-tax return will be reflected by an increase in the stock price, to readjust the dividend yield to make it competitive with other investments on an after-tax basis. Indeed, I believe the TCJA has caused stock prices to increase, and has reduced dividend yields, to preserve a comparable after-tax return for investors relative to investment options that existed before the TCJA. As such, the TCJA has had the effect of *reducing* utilities' equity cost of capital, based on the reduced income tax cost of a utility dividend.

Q HAVE ELECTRIC UTILITY COMPANIES BEEN ABLE TO MAINTAIN STRONG CREDIT RATINGS DURING PERIODS OF DECLINING AUTHORIZED RETURNS ON EQUITY WHILE SUPPORTING LARGE CAPITAL EXPENDITURE PLANS?

A Yes. The credit rating changes for the electric utility industry over the last several years are the result of marked improvement in overall financial health and credit quality. As shown below in Table 1, in 2008 approximately 69% of the electric utility industry was rated from BBB- to BBB+, 18% had a bond rating better than BBB+, and around 13% of the industry was below investment grade.

The overall industry rating improved steadily over the subsequent ten years. By 2016, none of the industry was below investment grade, and around 70% were BBB+

or stronger. Overall, the improvement in the electric utility industry's overall credit quality has been quite significant.

TABLE 1

S&P Ratings by Category
(Year End)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Regulated											
A or higher	8%	7%	9%	8%	6%	3%	3%	3%	6%	6%	3%
A-	10%	15%	14%	14%	17%	20%	21%	22%	28%	34%	32%
BBB+	23%	22%	17%	19%	14%	17%	32%	33%	36%	29%	32%
BBB	23%	27%	31%	35%	36%	49%	37%	33%	22%	20%	21%
BBB-	23%	20%	17%	14%	17%	6%	3%	3%	8%	11%	12%
Below BBB-	13%	10%	11%	11%	11%	6%	5%	6%	0%	0%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source.
EEI 2018 Q4 Credit Ratings Tab V S&P Rating by Comp Category

In 2018, after the change in federal tax law, all utilities maintained investment grade credit ratings.

Q HAVE UTILITIES BEEN ABLE TO ACCESS EXTERNAL CAPITAL TO SUPPORT CAPITAL EXPENDITURE PROGRAMS?

A Yes. In its October 30, 2018 "Utility Capital Expenditures Update," *RRA Financial Focus* (a division of S&P Global Market Intelligence) made several relevant comments about utility investments generally:

- Projected 2018 capital expenditures for the 50 gas and electric utilities in the RRA universe has [*sic*] stayed mostly steady at about $133.8 billion, an all-time high for the sector and nearly 14% higher than the prior forecast of $117.5 billion last fall.

- CapEx projections for the longer term increased modestly from our previous analysis in April 2018, rising to $118.9 billion for 2019 and $105.1 billion for 2020, as companies' plans for future projects solidified and new opportunities arose.

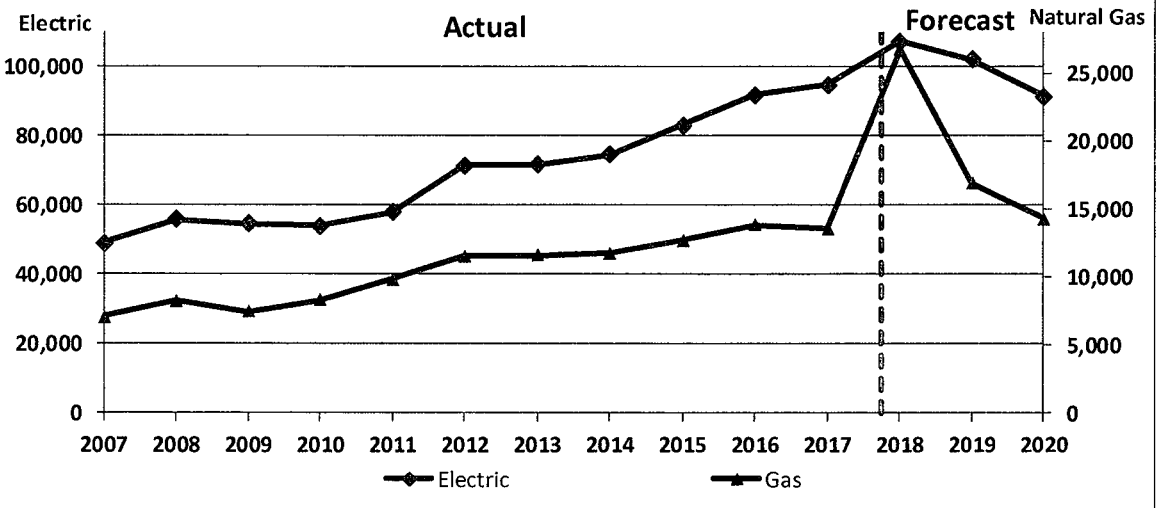
- From a natural gas perspective, many utilities are participating in the sizable and ongoing expansion of the nation's gas midstream network. In addition, replacement of mature gas distribution infrastructure has gained widespread momentum

and is likely to continue at material levels for many years, considering state and federal mandates to address safety.

- The federal tax code changes that took effect at the start of 2018 preserved a provision strongly supported by the industry to encourage investment: the deductibility of interest expense for regulated utilities. Being among the most capital-intensive industries, utilities would have had a much higher cost of capital absent this provision, which would have impacted capital investment planning and likely led to higher utility bills.[1]

Regulated utility companies have accessed significant amounts of capital to support substantial capital investments over at least the last ten years. As shown below in Figure 3, capital expenditures for electric and natural gas utilities have increased considerably over the period 2007 into 2018, and the forecasted capital expenditures remain high but are starting to abate.

FIGURE 3



Source: *S&P Global Market Intelligence, RRA Financial Focus*, Utility Capital Expenditures, October 30, 2018, Table 1.

[1] S&P Global Market Intelligence, RRA Financial Focus: "Utility Capital Expenditures Update," (Oct. 30, 2018).

As shown in Figure 3 above, capital investment is significantly higher for the electric utility industry than the natural gas industry, but the two industries follow the same trend over the historical and forecasted periods.

Q IS THERE EVIDENCE OF ROBUST VALUATIONS OF REGULATED UTILITY EQUITY SECURITIES?

A Yes. Robust valuations are an indication that utilities can sell securities at high prices, which is a strong indication that they can access equity capital under reasonable terms and conditions, and at relatively low cost. As shown on Exhibit MPG-2, the historical valuation of electric and gas utilities followed by *Value Line*, based on their price-to-earnings ("P/E") ratios, price-to-cash flow ("P/CF") ratios, and market price-to-book value ("M/B") ratios, indicates that utility security valuations today are very strong and robust relative to the last several years. These strong valuations of utility stocks indicate that utilities have access to equity capital under reasonable terms at relatively low cost.

Q HOW SHOULD THE COMMISSION USE THIS MARKET INFORMATION IN ASSESSING A FAIR RETURN FOR CEHE?

A Observable market evidence demonstrates that capital market costs are near historically low levels. While authorized returns on equity have fallen to the mid-9% range, utilities continue to have access to large amounts of external capital, even as they are funding large capital expenditure programs. Furthermore, utilities' investment-grade credit ratings are stable and have improved, due in part to supportive regulatory treatment. The Commission should carefully weigh all this important observable market evidence in assessing a fair return on equity for CEHE.

II.B. Market Comments on Utility Industry Outlook

Q PLEASE DESCRIBE THE CREDIT RATING OUTLOOK FOR REGULATED UTILITIES.

A Regulated utilities' credit ratings have improved over the last few years. Credit analysts have observed that utilities have strong access to capital at attractive pricing (i.e., low capital costs), which has supported very large capital programs.

S&P recently published a report titled "Industry Top Trends 2019: North America Regulated Utilities." In that report, S&P noted the following:

> **Ratings Outlook**: Rating trends across regulated electric, gas, and water utilities in North America remain mostly stable, reflecting generally supportive regulatory oversight. However, the industry's financial measures weakened in 2018 as a result of U.S. tax reform, robust capital spending, and flat to slightly negative load growth. In general, those utilities most affected by these developments were those who strategically operate with a minimal financial cushion at their current rating.[2]

More recently, Moody's placed the regulated utility industry on "Negative" outlook, primarily to reflect the uncertainty and short-term cash flow impacts of the TCJA, but also due to robust capital spending.

> The outlook for the US regulated utility sector has changed to negative from stable, reflecting increased financial risk due to lower cash flow and holding company leverage at its highest level since 2008. These factors will reduce the ratio of funds from operations (FFO) to debt by up to 200 basis points over the next 12-18 months.
>
> » **Cash flow will decline due to a lower contribution from deferred taxes**. The combination of the loss of bonus depreciation and a lower tax rate as a result of the Tax Cuts & Jobs Act (TCJA) means that utilities and their holding companies will lose some of the cash flow contribution from deferred taxes. Since 2010, deferred taxes have contributed around 14% of consolidated FFO, but we see this falling to around 8% through 2019. This will drive down the consolidated ratio of FFO to debt, for a peer group of 42 utility holding companies, from 17% toward 15% over the outlook period.

[2] *S&P Global Ratings*: "Industry Top Trends 2019: North America Regulated Utilities," at 1 (Nov. 8, 2018).

» **Regulatory and management responses may not improve financials until 2020**. Some state regulatory commissions have issued credit-supportive rate orders to offset reduced cash flow because of tax reform, and several holding companies are executing plans to strengthen their balance sheets. But it could take longer than 12-18 months before sector-wide financial metrics improve.

* * *

There are two principal approaches for a utility seeking to take mitigating action against rising financial risk. The first option is to pursue financial relief from regulators, which we see most companies doing across the industry in response to tax reform. The second is "self help," where management teams alter financial policies to improve cash flow or their balance sheet. These efforts could include cutting operating or capital costs, issuing equity, reducing debt, selling non-core assets or slowing dividend growth. Such strategies were popular during the early 2000s period known as "back to basics," when many companies shed unregulated and international assets, reduced debt and focused on strengthening core regulatory relationships.[3]

Similarly, Fitch states:

The Tax Cuts and Jobs Act signed into law on Dec. 22, 2017 has negative credit implications for U.S. regulated utilities and utility holding companies over the short-to-medium term, according to Fitch Ratings. A reduction in customer bills to reflect lower federal income taxes and return of excess accumulated deferred income taxes is expected to lower revenues and funds from operations (FFO) across the sector. Absent mitigating strategies on the regulatory front, this is expected to lead to weaker credit metrics and negative rating actions for those issuers that have limited headroom to absorb the leverage creep.[4]

Q PLEASE DESCRIBE UTILITY STOCK PRICE PERFORMANCE OVER THE LAST SEVERAL YEARS.

A As shown in Figure 4 below, S&P Global Market Intelligence ("MI") has recorded utility stock price performance compared to the market. The industry's stock performance

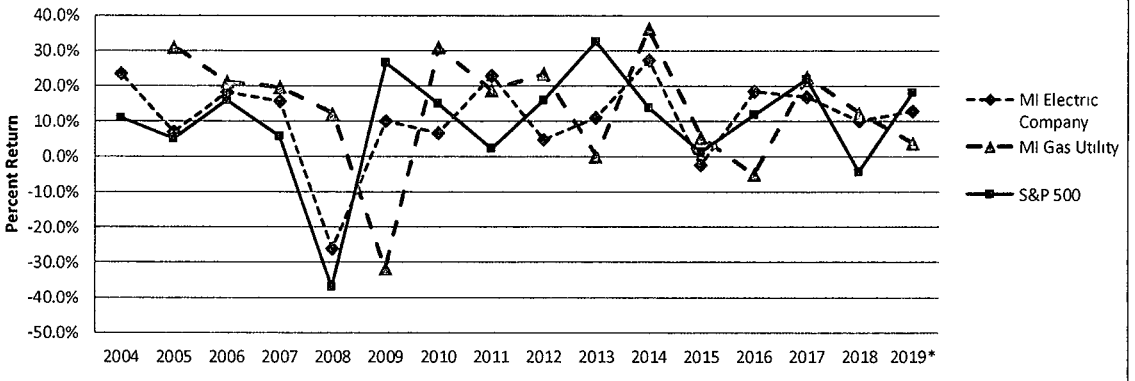
[3] *Moody's Investors Service Outlook*: "2019 outlook shifts to negative due to weaker cash flows, continued high leverage," at 1, 3 (Jun. 18, 2018)) (emphasis in original).

[4] *Fitch Ratings*: "Tax Reform Creates Near-term Credit Pressure for U.S. Utilities," (Jan. 24, 2018) (emphasis added).

data from 2004 through 2018 shows that the MI Electric Company and MI Gas Utility Indexes have followed the market through downturns and recoveries. However, utility investments have been less volatile during extreme market downturns. This more stable price performance for utilities supports my conclusion that market participants regard utility stock investments as moderate- to low-risk investments.

FIGURE 4

Index Comparison



Source: S&P Global Market Intelligence.
*Data through April 2019

II.C. Federal Reserve and Market Capital Costs Outlook

Q HAVE YOU CONSIDERED CONSENSUS MARKET OUTLOOKS FOR CHANGES IN INTEREST RATES IN FORMING YOUR RECOMMENDED RETURN ON EQUITY IN THIS CASE?

A Yes. The outlook for changes in interest rates, inflation, and Gross Domestic Product ("GDP") growth has been impacted by expectations of how the Federal Reserve Bank ("Fed") will change its monetary policy and impact the interest rate markets. Through the Federal Open Market Committee ("FOMC") the Fed has direct influence on short-term interest rates for lending between banks, which in turn impacts the short-term

interest rate market. The market is also aware that the Fed can impact long-term interest rates. In 2008, the Fed also implemented a monetary expansion policy designed to support economic growth, control inflation, and spur the labor market. Over the period 2008-2014, the Fed implemented a Quantitative Easing ("QE") program where it purchased long-term Treasury and mortgage-backed securities ("MBS") in open market transactions. This practice resulted in the Fed accumulating approximately $4.5 billion of these securities by the end of the QE program.

Around June 2017, the Fed announced a plan to start unwinding its balance sheet by a structured and managed process of reducing its balance sheet holdings of Treasury and MBS securities. It is important to note that the Fed has explicitly stated that it will unwind its balance sheet in a manner that minimizes disruption to the market.

Q DO YOU BELIEVE MARKET PARTICIPANTS AND INDEPENDENT CONSENSUS ECONOMISTS REFLECT ALL RELEVANT FACTORS IN FORMING THEIR INTEREST RATE PROJECTIONS?

A Yes. Because the Fed's actions are well-followed by market participants and captured in independent economists' outlooks for changes in capital market costs, the Fed's actions, along with all other relevant factors, are considered by consensus professional economists in forming their outlooks for changes in interest rates and capital market conditions.

As such, this well-informed outlook for changes in interest rates is certainly relevant in assessing whether or not the current low-cost capital market is expected to prevail or change over time.

Q WHAT DO INDEPENDENT ECONOMISTS' OUTLOOKS FOR FUTURE INTEREST RATES INDICATE?

A Independent economists expect today's low capital costs to prevail over at least the intermediate term. This is illustrated in projections for both short- and long-term changes in interest rates. Further, there is a clear trend in forecasted changes in interest rates over time, indicating that capital market participants are becoming more comfortable with today's low-cost capital market and expect it to prevail over at least the intermediate future.

For example, short-term projections suggest that the market expects capital market costs to remain relatively low. Table 2, below, shows capital cost projections over the next two years.

TABLE 2

Blue Chip Financial Forecasts
Projected Federal Funds Rate, 30-Year Treasury Bond Yields, and GDP Price Index

Publication Date	3Q 2018	4Q 2018	1Q 2019	2Q 2019	3Q 2019	4Q 2019	1Q 2020	2Q 2020	3Q 2020
Federal Funds Rate									
Dec-18	**1.9**	2.3	2.5	2.7	2.9	3.0	3.0		
Jan-19		2.2	2.5	2.6	2.8	2.9	2.9	2.9	
Feb-19		**2.2**	2.4	2.5	2.7	2.8	2.8	2.8	
Mar-19		**2.2**	2.4	2.4	2.5	2.6	2.7	2.6	
Apr-19			2.4	2.4	2.4	2.4	2.5	2.5	2.4
May-19			**2.4**	2.4	2.4	2.4	2.4	2.4	2.4
T-Bond, 30 yr.									
Dec-18	**3.1**	3.4	3.5	3.6	3.6	3.7	3.7		
Jan-19		3.3	3.3	3.4	3.5	3.5	3.6	3.6	
Feb-19		**3.3**	3.1	3.2	3.3	3.4	3.5	3.5	
Mar-19		**3.3**	3.1	3.1	3.2	3.3	3.4	3.4	
Apr-19			3.0	3.0	3.1	3.1	3.2	3.2	3.2
May-19			**3.0**	3.0	3.0	3.1	3.1	3.1	3.2
GDP Price Index									
Dec-18	**1.7**	2.3	2.2	2.3	2.2	2.2	2.2		
Jan-19		2.0	2.1	2.3	2.2	2.2	2.2	2.2	
Feb-19		**2.0**	1.9	2.3	2.1	2.2	2.2	2.2	
Mar-19		**1.8**	1.8	2.2	2.1	2.2	2.1	2.2	
Apr-19			1.7	2.2	2.1	2.1	2.1	2.2	2.1
May-19			**0.9**	2.3	2.1	2.1	2.1	2.1	2.1

Source and Note:
Blue Chip Financial Forecasts, December 2018 through May 2019.
Actual Yields in Bold

As this table shows, projected Treasury bond yields are not expected to increase significantly over the next two years. This is despite expected increases in short-term interest rates—more specifically, the Federal Funds Rate. GDP growth is also expected to stay relatively stable over the forecast period.

Importantly, an increase in the Federal Funds Rate does not automatically result in an increase in long-term interest rates. In fact, none of the nine increases in the Federal Funds Rate over the last few years (and most recently on December 19, 2018) caused comparable changes in long-term interest rates. As shown on Exhibit

MPG-3, the actions taken by the FOMC to increase the Federal Funds Rate have simply flattened the yield curve without causing a corresponding increase in long-term interest rates. This is significant because the cost of common equity is impacted by long-term interest rates, not short-term interest rates. Overall, recent increases in the Federal Funds Rate, and the expectation of continued increases, are not impacting long-term interest rates.

These same outlooks are captured in longer-term projections by consensus economists, as outlined in Table 3 below.

TABLE 3

30-Year Treasury Bond Yield Actual Vs. Projection

Description	Quarterly Average	2-Year Projected	5- to 10-Year Projected
2014			
Q1	3.79%	4.40%	5.0% - 5.5%
Q2	3.69%	4.50%	
Q3	3.44%	4.40%	5.3% - 5.6%
Q4	3.26%	4.30%	
2015			
Q1	2.97%	4.00%	4.9% - 5.1%
Q2	2.55%	3.70%	
Q3	2.83%	4.00%	4.8% - 5.0%
Q4	2.84%	3.90%	
2016			
Q1	2.96%	3.80%	4.5% - 4.8%
Q2	2.72%	3.60%	
Q3	2.64%	3.40%	4.3% - 4.6%
Q4	2.29%	3.10%	
2017			
Q1	2.82%	3.70%	4.2% - 4.5%
Q2	3.05%	3.80%	
Q3	2.91%	3.70%	4.3% - 4.5%
Q4	2.82%	3.60%	
2018			
Q1	2.82%	3.60%	4.1% - 4.3%
Q2	3.02%	3.80%	
Q3	3.09%	3.80%	4.2% - 4.4%
Q4	3.07%	3.70%	
2019			
Q1	3.27%	3.60%	3.9% - 4.2%

Sources:

Blue Chip Financial Forecasts,
March 2014 through March 2019.

As Table 3 shows, in Q1 2019, independent economists were projecting relatively low interest rates over the next five to ten years, and did not anticipate significant increases in long-term 30-year Treasury bond yields relative to current bond yields. Table 3 also illustrates that this current outlook is significantly different than the outlook for substantial increases in interest rates that prevailed for most of the last five years, and particularly prior to 2016. This is clear evidence that market participants are comfortable with today's low capital market costs and expect them to prevail over at least the intermediate period.

II.D. CEHE Investment Risk

Q PLEASE DESCRIBE THE MARKET'S ASSESSMENT OF CEHE'S INVESTMENT RISK.

A CEHE's investment risk is positively impacted by the supportive regulatory mechanisms for its retail operations in Texas. However, CEHE's investment risk is negatively impacted by its affiliation with its parent company, CNP, which substantially impairs CEHE's credit rating.

More specifically, CNP recently closed an approximately $6 billion leveraged acquisition of Vectren Corp. CNP's proposed funding structure includes issuing approximately $1.9 billion of new common stock, with the remainder of the purchase price funded by existing or new debt. In effect, the proposed acquisition represents about 22.4% equity, and the remainder is part of a leveraged transaction. Because of this leveraged transaction, CNP's bond rating was recently downgraded. Due to its affiliation with CNP, CEHE's bond rating was downgraded as well.

Q PLEASE DESCRIBE THE RECENT CREDIT RATING REPORTS ON CNP AND CEHE WITH PARTICULAR EMPHASIS ON THE PROPOSED LEVERAGED ACQUISITION OF VECTREN CORP.

A CEHE's and its parent company's bond ratings were downgraded to BBB+ from A- in February 2019, following these credit ratings being placed on Negative Watch in October 2018. In an October 2018 report, S&P Global stated that its outlook for the credit ratings were as follows:

> We are maintaining our long-term ratings on CPE and subsidiaries CenterPoint Energy Houston Electric LLC (CEHE) and CenterPoint Energy Resources Corp. (CERC) on CreditWatch with negative implications, including the 'A-' issuer credit ratings. We expect to resolve the CreditWatch by the date of acquisition closing, which could be by the end of the first quarter in 2019.[5]

The specific details underlying the placement of CNP's and, by extension, CEHE's, credit ratings on Watch Negative Implication were described as follows:

> The CreditWatch reflects the prospect for a one-notch downgrade due to our expectation that CPE's financial measures will deteriorate after using a disproportionate amount of debt to fund the Vectren acquisition, including assuming its debt. We expect to resolve the Credit Watch listing by the date of the transaction's closing, which could be by the end of the first quarter in 2019.[6]

Ultimately, in February 2019, S&P downgraded CNP's and CEHE's credit ratings to BBB+ from A-. In support of this rating decision, S&P stated as follows:

> - We lowered our ICRs on CPE subsidiaries CenterPoint Energy Houston Electric LLC (CEHE) and CenterPoint Energy Resources Corp. (CERC) to 'BBB+' from 'A-' and removed the ratings from CreditWatch. The outlook is stable. We affirmed the 'A' rating on CEHE's first and general mortgage bonds; the recovery rating is '1+'. In addition, we lowered the rating on CERC's senior unsecured debt to 'BBB+' from 'A-'. We also affirmed the 'A-2' short-term and commercial paper ratings on CPE and CERC.

[5] *S&P Global Ratings*: "CenterPoint Energy Inc. And Subsidiaries Still CreditWatch Negative; Senior Unsecured Debt Rated 'BBB+', Watch Negative," at 1 (Oct. 3, 2018).

[6] *Id.* at page 2 (emphasis added).

* * *

> The downgrade reflects our view that acquisition debt will increase leverage, leading to weakened financial measures over the next several years. Our base-case forecast incorporates FFO to debt in the 14%-16% range through 2021. In addition, the business risk profile will remain at the weaker end of the category because roughly 20% of consolidated operations will continue to consist of non-utility operations.[7]

CNP knew that acquiring Vectren would weaken its credit metrics when it decided to move forward with the transaction. In its Q3 2018 earnings call with shareholders, CNP informed investors that financing the Vectren deal would result in the following:

- Financing plan sized to achieve anticipated consolidated adjusted FFO/total debt of 15% or better by 2020 as determined by the rating agencies' methodology[8]

As CNP also noted in that investor presentation, S&P had placed CNP's, CEHE's, and CERC's credit ratings on Negative outlook, Moody's had placed CNP's credit rating on Negative outlook, while Fitch maintained a Stable outlook for CNP and its subsidiaries.

Q DO CREDIT RATINGS REPORTS PROVIDE ANY INSIGHT INTO THE STABILITY AND FINANCIAL STRENGTH OF CEHE ON A STAND-ALONE BASIS?

A Yes. The Commission's past regulatory practice and regulatory mechanisms have provided supportive regulatory treatment, which has produced predictable and stable financial performance for CEHE and supported its stand-alone credit rating. In fact, S&P has indicated that CEHE has a credit profile rating of a+ on a stand-alone basis.

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[7] *S&P Global RatingsDirect*: "Research Update: CenterPoint Energy Inc. And Subsidiaries Ratings Lowered To 'BBB+' From 'A-'; Outlook Stable," at 3-4 (Feb. 1, 2019).

[8] CenterPoint Energy Investor Update at 12 (Oct. 2, 2018).

However, when S&P considers CEHE's affiliate risks, which are largely driven by CNP, CEHE's public bond rating sinks three notches to BBB+.

Credit rating agencies have indicated that CEHE benefits from supportive regulatory treatment and predictable financial performance, and have recognized CEHE's capital program in outlining its stable credit outlook for its Texas operations. For example, the following credit rating agencies make very strong positive comments about the regulatory treatment afforded CEHE in Texas.

Specifically, S&P states:

> **Outlook: Stable**
>
> The stable rating outlook on CEHE reflects that of its parent CenterPoint Energy Inc. (CPE). The stable outlook on CPE and its subsidiaries reflects S&P Global Ratings' expectation of stable financial measures for the consolidated company, consistency in the projected mix of utility and non-utility businesses, and steady regulatory support. Our baseline forecast for 2019 and 2020 includes adjusted funds from operations (FFO) to debt in the 14%-16% range.
>
> * * *
>
> **Business Risk: Excellent**
>
> Our assessment of CEHE's business risk profile is based on the company's low-risk, rate-regulated transmission and distribution electric utility operations under generally constructive regulation, which provides for the timely recovery of approved costs such as capital expenditures.
>
> * * *
>
> CEHE operates within the Electric Reliability Council of Texas and under a generally constructive regulatory framework, and is regulated by the Public Utility Commission of Texas. The company benefits from multiple riders for transmission investments, distribution investments, and energy efficiency. Its consistent use of these riders--along with its above-average customer growth--reduces its regulatory lag and limits the need for future rate case filings. The company's limited geographical and regulatory diversity

marginally hampers the business risk profile, with its operations concentrated in Texas.[9]

Importantly, S&P assesses one of CEHE's key strengths as: "low-risk regulated electric transmission and distribution utility with no commodity exposure."[10]

Moody's states:

[redacted][11]

Fitch has also rated CEHE's credit outlooks with the following key rating drivers:

[redacted][12]

[9] *Standard & Poor's RatingsDirect:* "CenterPoint Energy Houston Electric LLC," at 4-6 (Mar. 22, 2019) (emphasis added).

[10] *Id.* at 3 (emphasis added).

[11] *Moody's Investors Service Credit Opinion*: "CenterPoint Energy Houston Electric, LLC," at 1-5 (Jun. 19, 2018) (provided by CEHE as Confidential Schedule II-C.2.10) (emphasis added).

[12] *Fitch Ratings*: "CenterPoint Energy Houston Electric, LLC," at 1 (Apr. 13, 2018) (provided by CEHE as Confidential Schedule II-C.2.10) (emphasis added).

[redacted][13]

Q PLEASE SUMMARIZE WHY YOU BELIEVE CEHE'S CREDIT RATING IS PRIMARILY DRIVEN BY ITS AFFILIATION RISK WITH CNP.

A There are limited financial separations between the financial standing of CEHE and its parent company, CNP. When CNP proposed a leveraged acquisition of Vectren Corp., CNP and all of its operating affiliates, including CEHE, received a bond rating downgrade.

On a stand-alone basis, the investment risk of CEHE is much lower than its parent company, CNP. As noted above, on a stand-alone credit rating basis, before recognition of its CNP affiliation risk, S&P has awarded CEHE a stand-alone credit rating of a+, which is three notches stronger than CEHE's actual published bond rating of BBB+.

The difference between CEHE's stand-alone bond rating and its actual published bond rating is its affiliation risk with CNP. This stand-alone versus corporate family credit rating is a critical element in establishing an appropriate and balanced ratemaking capital structure for CEHE. When setting CEHE's rates, the Commission should identify the credit metrics that are needed to support CEHE's bond rating on a stand-alone basis, as opposed to developing rates to support financial risks taken by CEHE's parent company, CNP. This will ensure that rates charged to customers are sufficient to maintain CEHE's financial integrity and credit standing at the lowest possible cost to retail customers.

[13] *Id.*

II.E. CEHE's Proposed Capital Structure

Q WHAT IS CEHE'S PROPOSED CAPITAL STRUCTURE?

A CEHE's proposed capital structure is sponsored by CEHE witness Robert B. McRae and is shown in Table 4 below:

TABLE 4

CEHE's Proposed Capital Structure

Description	Weight
Long-Term Debt	50.00%
Common Equity	50.00%
Total Regulatory Capital Structure	100.00%

Source: McRae Direct at 14 and Schedule II-C-2.1.

CEHE is proposing to increase the amount of equity in its ratemaking capital structure by 5%, from 45% equity in its last rate case, to 50% equity in this case.

Q WHY IS CEHE PROPOSING TO INCREASE ITS COMMON EQUITY RATIO TO 50.0%?

A On page 15 of his testimony, Mr. McRae identifies four justifications for the requested increase in common equity ratio. Specifically he cites:

- Elevated capital expenditures over the next five years;
- Risks caused by the TCJA;
- Risk of catastrophic damage from hurricanes; and
- Regulatory risk.

Q IS CEHE's PROPOSED RATEMAKING CAPITAL STRUCTURE REASONABLE?

A No. CEHE's proposed capital structure is not reasonable for several reasons.

1. CEHE has not demonstrated a need to increase the common equity component already approved by the Commission.

2. CEHE's approved regulatory capital structure has supported its credit rating and financial integrity for many years.

3. CEHE's ratemaking capital structure is in line with predictable and consistent ratemaking practices used by the Commission in setting overall rates of return for low-risk electric TDUs that operate within ERCOT.

4. CEHE's approved capital structure has allowed CEHE to support its capital investment projects while providing reliable service.

5. A capital structure with a higher common equity component places an unreasonable burden on ratepayers.

Q PLEASE DESCRIBE THE CAPITAL STRUCTURES APPROVED BY THE COMMISSION IN CEHE'S LAST TWO RATE CASES.

A In CEHE's last rate case (Docket No. 38339, 2011) the Commission approved a ratemaking capital structure with an increased common equity ratio of 45% rather than the 40% previously used to set rates for CEHE.[14]

Q HAS CEHE'S ACTUAL CAPITAL STRUCTURE ALIGNED WITH THE APPROVED RATEMAKING CAPITAL STRUCTURE, AND HAS THIS CAPITAL STRUCTURE SUPPORTED CEHE'S CREDIT STANDING?

A Yes. Over the last six years, CEHE's actual capital structure reasonably aligned with the ratemaking capital structure the Commission used to set its rates. This is illustrated below in Table 5.

[14] McRae Direct at 12.

TABLE 5

Actual CEHE Capital Structure

Description	2013	2014	2015	2016	2017	2018
Long-Term Debt	56.4%	55.8%	55.6%	55.2%	55.1%	55.2%
Common Equity	43.6%	44.2%	44.4%	44.8%	44.9%	44.8%
Total Capital	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
S&P Adj. Debt Ratio*	**58%**	**55%**	**60%**	**54%**	**55%**	**54%**

Source:
FERC Form 1, as of December 31, 2013-2018 at 110.
*Standard & Poor's, Capital IQ, downloaded August 2, 2018.

As shown in the table above, CEHE's ratemaking capital structure has shifted from approximately 43% equity and 57% debt, to 45% equity and 55% debt. CEHE has been able to manage its actual capital; structure to align with the ratemaking capital structure approved by the Commission, and its actual capital structure has supported its investment grade bond rating.

Q DOES CEHE WITNESS MR. MCRAE ASSERT THAT MAINTAINING A STRONGER BOND RATING IS NECESSARY TO PRODUCE INTEREST RATE SAVINGS ON CEHE'S COST OF DEBT?

A Yes. At pages 38 and 39 of his testimony, Mr. McRae states that the one-notch downgrade to BBB+ would increase the indicative pricing for a 30-year, $700 million loan offering by about 22.9 basis points. That would increase costs to ratepayers by about $48.1 million over the life of the bond. The annual interest is approximately 2.1% for this $700 million bond issue, an approximate 23 basis point increase in the interest rate.

Q EVEN ASSUMING THAT CHANGING CEHE'S CAPITAL STRUCTURE FROM 45% EQUITY TO 50% EQUITY WOULD AVOID A ONE-NOTCH DOWNGRADE AS MR. MCRAE CLAIMS, WOULD THAT CHANGE IN CAPITAL STRUCTURE REDUCE COSTS TO CUSTOMERS?

A No. Exhibit MPG-4 shows that, under these conditions, CEHE's annual revenue requirement would increase by approximately $39.2 million. This reflects an increase in the cost of equity of $45.9 million, which is offset by a $6.7 million *decrease* in CEHE's cost of debt. As such, even if Mr. McRae's analysis is correct, CEHE's proposal to change its ratemaking capital structure would significantly increase costs to customers.

But more importantly, the argument that increasing the equity component in CEHE's capital structure will support a stronger bond rating is problematic at best. As a reminder, CEHE's bond rating was reduced due to its parent company's financing activities, and not because of regulatory treatment in Texas, including the capital structure previously used to set CEHE's rates. As such, if the Commission adopts CEHE's proposed capital structure, it is more likely that customers will pay a higher cost for the thicker equity component of the capital structure, but will receive no debt interest rate savings because CEHE's bond ratings will still be dragged down by its affiliate risk.

II.F. CEHE Credit Metrics

Q CEHE WITNESS MR. MCRAE ALSO MADE CREDIT METRIC PROJECTIONS ASSUMING A 50%/50% EQUITY/DEBT CAPITAL STRUCTURE AND A 45%/55% CAPITAL STRUCTURE. DO THESE PROJECTIONS INDICATE THAT A HIGHER EQUITY COMPONENT IN CEHE'S CAPITAL STRUCTURE IS NECESSARY?

A No. As shown in Mr. McRae's testimony on his Table 5 at page 23, he projects that with a 45%/55% equity/debt capital structure, CEHE would have an FFO to debt ratio of 15.3% to 15.9% over the period 2019 through 2021. These ratios would change to 15.3% to 17.9% if the debt ratio is reduced to 50%.

S&P forecasts for both CEHE and CNP indicate that their credit rating outlook is "Stable," based in part on a forecasted FFO to debt ratio in the range of 14% to 16% in 2019/2020.[15] S&P also notes concern that CEHE and CNP might face a credit downgrade if their FFO to debt ratio falls below 13%. S&P's outlook for FFO to debt credit metrics is the same for both CNP and CEHE, rather than differentiating the two based on their individual business risk profiles and cash flow volatility measures.

Importantly, Mr. McRae's projections show that a 45% equity ratemaking capital structure will produce FFO/debt metrics in the range of 15.0% to 16.0%, which is in line with S&P's forecast[16] and will support CNP's and CEHE's stable credit outlook over his forecast period.[17] As such, no change in CEHE's ratemaking capital structure is needed to maintain its or CNP's bond rating.

However, to the extent CEHE implements ring-fence separations to allow it to finance its utility operations based on its own stand-alone investment risk, its cost of

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[15] *Standard & Poor's RatingsDirect*: "CenterPoint Energy Houston Electric, LLC," (Mar. 22, 2019) and "CenterPoint Energy Inc." (Mar. 21, 2019).

[16] McRae Direct at 23, Table 5.

[17] *Standard & Poor's RatingsDirect*: "CenterPoint Energy Houston Electric, LLC," (Mar. 22, 2019) and "CenterPoint Energy Inc." (Mar. 21, 2019).

service would be reduced while still preserving CEHE's bond rating and access to capital.

Q PLEASE EXPLAIN WHY CEHE WOULD BE ABLE TO FINANCE ITS UTILITY OPERATIONS AT A LOWER COST TO CUSTOMERS IF CEHE'S BOND RATING WERE BASED ON A STAND-ALONE CREDIT OUTLOOK ASSESSMENT.

A CEHE's current credit rating is significantly impacted by the limited financial separation from its parent company, CNP. In assessing the credit metrics that would be adequate to maintain CEHE's bond rating on a stand-alone basis, S&P finds that CEHE is among a small group of regulated utilities in the U.S. that have "no commodity risk" and also benefit from supportive regulatory treatment. For this group of utilities, S&P states the credit rating should be consistent with "Low Volatility" credit metric benchmarks.[18] In significant contrast, S&P requires most regulated utility companies that have commodity cost risk exposure, like CNP, to maintain credit rating benchmarks consistent with "Medial Volatility" benchmarks. In essence, due to commodity risk, CNP has more cash flow volatility than CEHE, so its target credit metrics are different.

The difference in credit metric benchmarks for: (1) Low Volatility, and (2) Medial Volatility utilities is shown below in Table 6 as published by S&P.

[18] *S&P Global RatingsDirect*: "Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry," November 19, 2013, page 13.

TABLE 6

S&P Credit Metrics

Low Volatility

Description	Intermediate	Significant	Aggressive
Debt to EBITDA	3.0x-4.0x	4.0x - 5.0x	5.0x - 6.0x
FFO to Total Debt	13% - 23%	9% - 13%	6% - 9%
Credit Rating	**A**	**A-**	**BBB**

Medial Volatility

Description	Intermediate	Significant	Aggressive
Debt to EBITDA	2.5x - 3.5x	3.5x - 4.5x	4.5x - 5.5x
FFO to Total Debt	23% - 35%	13% - 23%	9% - 13%
Credit Rating	**A**	**A-**	**BBB**

Sources and Notes:
Standard & Poor's: "Criteria: Corporate Methodology," November 19, 2013.
Business Risk: Excellent
Financial Risk: Intermediate

Q CAN YOU PROVIDE MORE DETAIL ON S&P'S USE OF LOW VOLATILITY AND MEDIAL VOLATILITY CREDIT METRICS TABLES?

A Yes. S&P assesses the predictability and volatility of utilities' cash flows in setting the appropriate credit metric target to utilities. For a comparison of the Low Volatility and the Medial Volatility qualifications used by S&P to identify the target credit metrics for each of its utilities, S&P makes the following determinations:

> 78. We apply the "low-volatility" table to regulated utilities that qualify under the corporate criteria and with all of the following characteristics:
>
> - A vast majority of operating cash flows come from regulated operations that are predominantly at the low end of the utility risk spectrum (e.g., a "network," or distribution/transmission business unexposed to commodity risk and with very low operating risk);

- A "strong" regulatory advantage assessment;

- An established track record of normally stable credit measures that is expected to continue;

- A demonstrated long-term track record of low funding costs (credit spread) for long-term debt that is expected to continue; and

- Non-utility activities that are in a separate part of the group (as defined in our group rating methodology) that we consider to have "nonstrategic" group status and are not deemed high risk and/or volatile.

79. We apply the "medial volatility" table to companies that do not qualify under paragraph 78 with:

- A majority of operating cash flows from regulated activities with an "adequate" or better regulatory advantage assessment; or

- About one-third or more of consolidated operating cash flow comes from regulated utility activities with a "strong" regulatory advantage and where the average of its remaining activities have a competitive position assessment of '3' or better.[19]

As outlined above, the primary difference between a Low Volatility and a Medial Volatility matrix depends on whether or not the utility is exposed to commodity cost recovery risk. Very few regulated utilities do not have commodity cost risk, but CEHE is among that limited number of utilities. Hence, the Low Volatility table is the relevant credit metric targets to use to establish a balanced and reasonable ratemaking capital structure for CEHE.

Q IF CEHE'S CREDIT METRICS WERE CONSIDERED ON A STAND-ALONE BASIS, HOW WOULD THAT IMPACT THE CREDIT METRICS NECESSARY TO MAINTAIN A STRONG CREDIT RATING?

A As shown in Table 6 above, the credit metrics referenced by Mr. McRae in support of his ratemaking capital structure in this proceeding reflect the Medial Volatility matrix

[19] *Id.*, emphasis added.

published by S&P. For a company like CNP that has significant commodity risk, an "Excellent" business risk profile, and a "Significant" financial risk profile, S&P requires an FFO/debt metrics within the range of 13% to 23%. The FFO/debt metrics threshold of 18% referenced by Mr. McRae in support of his proposal to adjust CEHE's ratemaking capital structure to 50% common equity is at the midpoint of the "Significant" financial risk profile shown above for the Medial Volatility table.

However, for a limited number of utilities like CEHE, that do not have commodity risks, S&P applies a "Low Volatility" credit matrix target. Hence, on a stand-alone basis, CEHE would only need an FFO to debt ratio in the range of 9% to 13% to support an A- bond rating.

If CEHE implemented the ring-fence separations proposed by TIEC witness Charles Griffey, then CEHE's capital structure could be based on its own stand-alone business and financial risk, and a much lower cost capital structure would be appropriate for setting rates in this proceeding.

Q IF THE COMMISSION USED A RATEMAKING CAPITAL STRUCTURE OF 60% DEBT AND 40% EQUITY, CONSISTENT WITH CEHE'S RATEMAKING CAPITAL STRUCTURE IN THE PAST, AND APPROVED YOUR RETURN ON EQUITY OF 9.25%, WOULD CEHE'S CREDIT METRICS ALIGN WITH THE LOW VOLATILITY TABLE AND SUPPORT CEHE'S CURRENT BOND RATING?

A Yes. As shown on Exhibit MPG-5, with a 60/40 debt/equity capital structure and a 9.25% return on equity, CEHE's stand-alone FFO to debt ratio will range from approximately 13% to 14% over the forecast period, which is above the "Significant" financial risk profile for a "Low Volatility" company with an "Excellent" business risk profile. The projected debt to EBITDA ratio would be 5.0x, which again is in line with the "Significant" category. These credit metrics indicate that with a 60% debt/40%

equity ratio, CEHE on a stand-alone basis would have credit metrics that would support a bond rating of A-, one notch stronger than its current BBB+ bond rating.

Q WHAT WOULD BE THE IMPACT OF USING A 60/40 CAPITAL STRUCTURE AND 9.25% RETURN ON EQUITY ON CEHE'S REVENUE REQUIREMENT, RELATIVE TO CEHE'S PROPOSAL?

A As shown on Exhibit MPG-6, adjusting CEHE's overall rate of return for a 60/40 capital structure at a 9.25% return on equity would reduce CEHE's revenue requirement by $104.1 million compared to CEHE's proposed 10.4% return on equity and 50/50 capital structure.

Q WHAT IS YOUR PROPOSED CAPITAL STRUCTURE FOR CEHE IN THIS REGULATORY PROCEEDING?

A I recommend a ratemaking capital structure for CEHE as shown below in Table 7.

TABLE 7

Gorman's Proposed Capital Structure
(June 6, 2019)

Description	Weight
Long-Term Debt	60.0%
Common Equity	40.0%
Total Regulatory Capital Structure	100.0%

Source: Exhibit MPG-1.

The capital structure in Table 7 above was previously used to set rates for CEHE, and reflects CEHE's stand-alone credit standing. Because of CEHE's lack of commodity cost recovery risk, and favorable regulatory mechanisms that allow it to

adjust charges to customers to fully recover its cost of service in a stable and predictable manner, CEHE has extraordinarily low business risk. This allows it to set rates using a ratemaking capital structure with above-average financial risk. The net effect of below average business risk and above-average financial risk is a level of total investment risk for CEHE that is reasonably reflected in this ratemaking capital structure. Accurately reflecting a total level of investment risk in setting rates allows for CEHE to maintain its strong investment grade bond rating, and continue to attract capital, but to do so at the lowest possible cost to its retail customers.

II.G. Embedded Cost of Debt

Q WHAT EMBEDDED COST OF DEBT IS CEHE PROPOSING IN THIS PROCEEDING?

A Mr. McRae proposes an embedded cost of debt of 4.38% in Schedule II-C-2.4a.

III. RETURN ON EQUITY

Q PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF COMMON EQUITY."

A A utility's cost of common equity is the expected return that investors require on an investment in the utility. Investors expect to earn their required return from receiving dividends and through stock price appreciation.

Q PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED UTILITY'S COST OF COMMON EQUITY.

A In general, determining a fair cost of common equity for a regulated utility has been framed by two hallmark decisions of the U.S. Supreme Court: Bluefield Water Works

& Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) and Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944).

These decisions identify the general financial and economic standards to be considered in establishing the cost of common equity for a public utility. Those general standards provide the authorized return should: (1) be sufficient to maintain financial integrity; (2) attract capital under reasonable terms; and (3) be commensurate with returns investors could earn by investing in other enterprises of comparable risk.

Q PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE CEHE'S COST OF COMMON EQUITY.

A I have used several models based on financial theory to estimate CEHE's cost of common equity. These models are: (1) a constant growth Discounted Cash Flow ("DCF") model using consensus analysts' growth rate projections; (2) a constant growth DCF using sustainable growth rate estimates; (3) a multi-stage growth DCF model; (4) a Risk Premium model; and (5) a Capital Asset Pricing Model ("CAPM"). I have applied these models to a group of publicly traded utilities with investment risk similar to CEHE.

III.A. Risk Proxy Group

Q PLEASE DESCRIBE HOW YOU IDENTIFIED A PROXY UTILITY GROUP THAT COULD BE USED TO ESTIMATE CEHE'S CURRENT MARKET COST OF EQUITY.

A I relied on the same proxy group developed by CEHE witness Mr. Hevert with one exception. I excluded Avangrid from the proxy group. Avangrid is a company that is majority owned by Iberdrola (approximately 83% according to *Value Line*) where less than 20% of its stock is publicly traded. Because of the control premium likely reflected

in the valuation of this stock, its valuation characteristics are not comparable to the other publicly traded proxy group companies, and it should not be included in CEHE's proxy group. Therefore, I excluded Avangrid from my proxy group.

Q PLEASE DESCRIBE WHY YOU BELIEVE YOUR PROXY GROUP IS REASONABLY COMPARABLE IN INVESTMENT RISK TO CEHE.

A The proxy group shown in Exhibit MPG-7, has an average corporate credit rating from S&P of BBB+, which is identical to CEHE's credit rating from S&P. The proxy group has an average corporate credit rating from Moody's of Baa1, which is a notch lower than CEHE's credit rating from Moody's of A3.

The proxy group has an average common equity ratio of 45.2% from S&P and 48.4% (excluding short-term debt) from *Value Line* for 2018.

Based on this information, I believe my proxy group is reasonably comparable in investment risk to CEHE.

III.B. Discounted Cash Flow Model

Q PLEASE DESCRIBE THE DCF MODEL.

A The DCF model posits that a stock price is valued by summing the present value of expected future cash flows discounted at the investor's required rate of return or cost of capital. This model is expressed mathematically as follows:

$$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \ldots . \frac{D_\infty}{(1+K)^\infty} \qquad \text{(Equation 1)}$$

P_0 = Current stock price
D = Dividends in periods 1 - ∞
K = Investor's required return

This model can be rearranged in order to estimate the discount rate or investor-required return, known as "K." If it is reasonable to assume that earnings and dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

$$K = D_1/P_0 + G \qquad \text{(Equation 2)}$$

K = Investor's required return
D_1 = Dividend in first year
P_0 = Current stock price
G = Expected constant dividend growth rate

Equation 2 is referred to as the annual "constant growth" DCF model.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.

A As shown in Equation 2 above, the DCF model requires a current stock price, expected dividend, and expected growth rate in dividends.

Q WHAT STOCK PRICE DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

A I relied on the average of the weekly high and low stock prices of the utilities in the proxy group over a 13-week period ending on May 4, 2019. An average stock price is less susceptible to market price variations than a price at a single point in time. Therefore, an average stock price is less susceptible to aberrant market price movements, which may not reflect the stock's long-term value.

A 13-week average stock price reflects a period that is still short enough to contain data that reasonably reflects current market expectations, but the period is not so short as to be susceptible to market price variations that may not reflect the stock's long-term value. In my judgment, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and the need to capture sufficient data to smooth out aberrant market movements.

Q WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

A I used the most recently paid quarterly dividend as reported in *Value Line*.[20] This dividend was annualized (multiplied by 4) and adjusted for next year's growth to produce the D_1 factor for use in Equation 2 above. In other words, I calculate D_1 by multiplying the annualized dividend (D_0) by (1+G).

Q WHAT DIVIDEND GROWTH RATES DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

A There are several methods that can be used to estimate the expected growth in dividends. However, regardless of the method, to determine the market-required return on common equity, one must attempt to estimate investors' consensus about what the dividend, or earnings growth rate, will be and not what an individual investor or analyst may use to make individual investment decisions.

As predictors of future returns, securities analysts' growth estimates have been shown to be more accurate than growth rates derived from historical data.[21] That is, assuming the market generally makes rational investment decisions, analysts' growth projections are more likely to influence investors' decisions, which are captured in observable stock prices, than growth rates derived only from historical data.

For my constant growth DCF analysis, I have relied on a consensus, or mean, of professional securities analysts' earnings growth estimates as a proxy for investor consensus dividend growth rate expectations. I used the average of analysts' growth

[20] *The Value Line Investment Survey*, February 15, March 15, and April 26, 2019.

[21] *See, e.g.,* David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," *The Journal of Portfolio Management*, Spring 1989.

rate estimates from three sources: Zacks, MI, and Reuters. All such projections were available on May 3, 2019, and all were reported online.

Each consensus growth rate projection is based on a survey of securities analysts. There is no clear evidence whether a particular analyst is most influential on general market investors. Therefore, a single analyst's projection does not as reliably predict consensus investor outlooks as does a consensus of market analysts' projections. The consensus estimate is a simple arithmetic average, or mean, of surveyed analysts' earnings growth forecasts. A simple average of the growth forecasts gives equal weight to all surveyed analysts' projections. Therefore, a simple average, or arithmetic mean, of analyst forecasts is a good proxy for market consensus expectations.

Q WHAT ARE THE GROWTH RATES YOU USED IN YOUR CONSTANT GROWTH DCF MODEL?

A The growth rates I used in my DCF analysis are shown in Exhibit MPG-8. The average growth rate for my proxy group is 5.38%.

Q WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?

A As shown in Exhibit MPG-9, the average and median constant growth DCF returns for my proxy group for the 13-week analysis are 9.31% and 9.57%, respectively.

Q DO YOU HAVE ANY COMMENTS ON THE RESULTS OF YOUR CONSTANT GROWTH DCF ANALYSIS?

A Yes. The constant growth DCF analysis for my proxy group is based on a group average long-term sustainable growth rate of 5.38%. The three- to five-year growth rates are higher than my estimate of a maximum long-term sustainable growth rate of

4.00%, which I discuss later in this testimony. I believe the constant growth DCF analysis produces a reasonable high-end return estimate.

Q HOW DID YOU ESTIMATE A MAXIMUM LONG-TERM SUSTAINABLE GROWTH RATE?

A A long-term sustainable growth rate for a utility stock cannot exceed the growth rate of the economy in which it sells its goods and services. Hence, the long-term maximum sustainable growth rate for a utility investment is best proxied by the projected long-term Gross Domestic Product ("GDP"). *Blue Chip Economic Indicators* projects that over the next 5 and 10 years, the U.S. nominal GDP will grow at an annual rate of approximately 4.00%. These GDP growth projections reflect a real growth outlook of around 1.9% and an inflation outlook of around 2.1% going forward. As such, the average growth rate over the next 10 years is around 4.00%, which I believe is a reasonable proxy of long-term sustainable growth.[22]

In my multi-stage growth DCF analysis, I discuss academic and investment practitioner support for using the projected long-term GDP growth outlook as a maximum sustainable growth rate projection. Hence, using the long-term GDP growth rate as a conservative projection for the maximum sustainable growth rate is logical, and is generally consistent with academic and economic practitioner accepted practices.

[22] *Blue Chip Economic Indicators,* March 10, 2019, at 14.

III.C. Sustainable Growth DCF

Q PLEASE DESCRIBE HOW YOU ESTIMATED A SUSTAINABLE LONG-TERM GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF MODEL.

A A sustainable growth rate is based on the percentage of the utility's earnings that is retained and reinvested in utility plant and equipment. These reinvested earnings increase the earnings base (rate base). Earnings grow when plant funded by reinvested earnings is put into service, and the utility is allowed to earn its authorized return on such additional rate base investment.

The internal growth methodology is tied to the percentage of earnings retained in CEHE and not paid out as dividends. The earnings retention ratio is 1 minus the dividend payout ratio. As the payout ratio declines, the earnings retention ratio increases. An increased earnings retention ratio will fuel stronger growth because the business funds more investments with retained earnings.

The payout ratios of the proxy group are shown in my Exhibit MPG-10. These dividend payout ratios and earnings retention ratios then can be used to develop a sustainable long-term earnings retention growth rate. A sustainable long-term earnings retention ratio will help gauge whether analysts' current three- to five-year growth rate projections can be sustained over an indefinite period of time.

The data used to estimate the long-term sustainable growth rate is based on CEHE's current market-to-book ratio and on *Value Line*'s three- to five-year projections of earnings, dividends, earned returns on book equity, and stock issuances.

As shown in Exhibit MPG-11, the average sustainable growth rate for the proxy group using this internal growth rate model is 4.23%.

Q WHAT IS THE DCF ESTIMATE USING THESE SUSTAINABLE LONG-TERM GROWTH RATES?

A A DCF estimate based on these sustainable growth rates is developed in Exhibit MPG-12. As shown there, and using the same formula in Equation 2 above, a sustainable growth DCF analysis produces proxy group average and median DCF results for the 13-week period of 8.11% and 8.20%, respectively.

III.D. Multi-Stage Growth DCF Model

Q HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?

A Yes. My first constant growth DCF is based on consensus analysts' growth rate projections so it is a reasonable reflection of rational investment expectations over the next three to five years. The limitation on this constant growth DCF model is that it cannot reflect a rational expectation that a period of high or low short-term growth can be followed by a change in growth to a rate that better reflects long-term sustainable growth. Hence, I performed a multi-stage growth DCF analysis to reflect this outlook of changing growth expectations.

Q WHY DO YOU BELIEVE GROWTH RATES CAN CHANGE OVER TIME?

A Analyst-projected growth rates over the next three to five years will change as utility earnings growth outlooks change. Utility companies go through cycles in making investments in their systems. When utility companies are making large investments, their rate base grows rapidly, which in turn accelerates earnings growth. Once a major construction cycle is completed or levels off, growth in the utility rate base slows and its earnings growth slows from an abnormally high three- to five-year rate to a lower sustainable growth rate.

As major construction cycles extend over longer periods of time, even with an accelerated construction program, the growth rate of the utility will slow simply because rate base growth will slow and the utility has limited human and capital resources available to expand its construction program. Therefore, the three- to five-year growth rate projection should be used as a long-term sustainable growth rate, but not without making a reasonable informed judgment to determine whether it considers the current market environment, the industry, and whether the three- to five-year growth outlook is sustainable.

Q PLEASE DESCRIBE YOUR MULTI-STAGE GROWTH DCF MODEL.

A The multi-stage growth DCF model reflects the possibility of non-constant growth for a company over time. The multi-stage growth DCF model reflects three growth periods: (1) a short-term growth period consisting of the first five years; (2) a transition period, consisting of the next five years (6 through 10); and (3) a long-term growth period starting in year 11 through perpetuity.

For the short-term growth period, I relied on the consensus analysts' growth projections described above in relationship to my constant growth DCF model. For the transition period, the growth rates were reduced or increased by an equal factor reflecting the difference between the analysts' growth rates and the long-term sustainable growth rate. For the long-term growth period, I assumed each company's growth would converge to the maximum sustainable long-term growth rate.

Q WHY IS THE GDP GROWTH PROJECTION A REASONABLE PROXY FOR THE MAXIMUM SUSTAINABLE LONG-TERM GROWTH RATE?

A Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the economy in which they sell services. Utilities' earnings/dividend growth is created by

increased utility investment or rate base. Such investment, in turn, is driven by service area economic growth and demand for utility service. In other words, utilities invest in plant to meet sales demand growth. Sales growth, in turn, is tied to economic growth in their service areas.

The U.S. Department of Energy, Energy Information Administration ("EIA") has observed utility sales growth tracks U.S. GDP growth, albeit at a lower level, as shown in Exhibit MPG-13. Utility sales growth has lagged behind GDP growth for more than a decade. As a result, nominal GDP growth is a very conservative proxy for utility sales growth, rate base growth, and earnings growth. Therefore, the U.S. GDP nominal growth rate is a conservative proxy for the highest sustainable long-term growth rate of a utility.

Q IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT GROW AT A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?

A Yes. This concept is supported in published analyst literature and academic work. Specifically, in a textbook titled "Fundamentals of Financial Management," published by Eugene Brigham and Joel F. Houston, the authors state as follows:

> The constant growth model is most appropriate for mature companies with a stable history of growth and stable future expectations. Expected growth rates vary somewhat among companies, but dividends for mature firms are often expected to grow in the future at about the same rate as nominal gross domestic product (real GDP plus inflation).[23]

The use of the economic growth rate is also supported by investment practitioners as outlined as follows:

[23] *"Fundamentals of Financial Management,"* Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298, emphasis added.

Estimating Growth Rates

One of the advantages of a three-stage discounted cash flow model is that it fits with life cycle theories in regards to company growth. In these theories, companies are assumed to have a life cycle with varying growth characteristics. Typically, the potential for extraordinary growth in the near term eases over time and eventually growth slows to a more stable level.

* * *

Another approach to estimating long-term growth rates is to focus on estimating the overall economic growth rate. Again, this is the approach used in the *Ibbotson Cost of Capital Yearbook*. To obtain the economic growth rate, a forecast is made of the growth rate's component parts. Expected growth can be broken into two main parts: expected inflation and expected real growth. By analyzing these components separately, it is easier to see the factors that drive growth.[24]

Q ARE THERE ANY ACTUAL INVESTMENT RESULTS THAT SUPPORT THE NOTION THAT THE GROWTH ON STOCK INVESTMENTS WILL NOT EXCEED THE NOMINAL GROWTH OF THE U.S. GDP?

A Yes. This is evident by a comparison of the compound annual growth of the U.S. GDP to the geometric growth of the U.S. stock market. Morningstar measures the historical geometric growth of the U.S. stock market over the period 1926-2018 to be approximately 5.8%.[25] During this same time period, the U.S. nominal compound annual growth of the U.S. GDP was approximately 6.1%.[26]

As such, over the past 90 years, the geometric average growth of the U.S. nominal GDP has been higher but comparable to the average geometric growth of the U.S. stock market capital appreciation. This historical relationship indicates that the U.S. GDP growth outlook is a conservative estimate of the long-term sustainable growth of U.S. stock investments.

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[24] *Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook* at 51 and 52.
[25] *Duff & Phelps, 2019 SBBI Yearbook* at 6-17.
[26] U.S. Bureau of Economic Analysis, April 26, 2019.

Q WHAT IS THE GEOMETRIC AVERAGE AND WHY IS IT APPROPRIATE TO USE THIS MEASURE TO COMPARE GDP GROWTH TO CAPITAL APPRECIATION IN THE STOCK MARKET?

A The geometric average growth rate and compound annual growth rate are used interchangeably. The geometric annual growth rate is the calculated growth rate, or return, that measures the magnitude of growth from start to finish. The geometric average is best, and most often, used as a measurement of performance or growth over a long period of time.[27] Because I am comparing achieved growth in the stock market to achieved growth in U.S. GDP over a long period of time, the geometric average growth rate is most appropriate.

Q HOW DID YOU DETERMINE A LONG-TERM GROWTH RATE THAT REFLECTS THE CURRENT CONSENSUS MARKET PARTICIPANT OUTLOOK?

A I relied on the economic consensus of long-term GDP growth projections. *Blue Chip Economic Indicators* publishes the consensus for GDP growth projections twice a year. These GDP growth outlooks are the best available measure of the market's assessment of long-term GDP growth. These analyst projections reflect all current outlooks for GDP and are likely the most influential on investors' expectations of future growth outlooks. The consensus projections published GDP growth rate outlook is 4.00% over the next 10 years.[28]

Therefore, I propose to use the consensus for projected five- and ten-year average GDP growth rates of 4.00%, as published by *Blue Chip Economic Indicators*, as an estimate of long-term sustainable growth. *Blue Chip Economic Indicators*

[27] *New Regulatory Finance*, Roger Morin, PhD, at 133-134.
[28] *Blue Chip Economic Indicators*, March 10, 2019, at 14.

projections provide real GDP growth projections of 1.9% and GDP inflation of 2.1%[29] over the five-year and ten-year projection periods, of 4.0% on the nominal projections. These GDP growth forecasts represent the most likely views of market participants because they are based on published economic consensus projections.

Q DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM GDP GROWTH?

A Yes, and these alternative sources corroborate the consensus analysts' projections I relied on. For example, consider the analysts' projections shown in Table 8 below.

TABLE 8

GDP Forecasts

Source	Term	Real GDP	Inflation	Nominal GDP
Blue Chip Economic Indicators	5-10 Yrs	1.9%	2.1%	4.0%
EIA - Annual Earnings Outlook	27 Yrs	1.9%	2.3%	4.2%
Congressional Budget Office	6 Yrs	1.8%	2.1%	3.9%
Moody's Analytics	25 Yrs	2.0%	1.9%	3.9%
Social Security Administration	48 Yrs			4.4%
The Economist Intelligence Unit	25 Yrs	1.9%	1.9%	3.8%

The EIA in its *Annual Energy Outlook* projects real GDP out until 2050. In its 2019 Annual Report, the EIA projects real GDP through 2050 to be 1.9% and a long-term GDP price inflation projection of 2.3%. The EIA data supports a long-term nominal GDP growth outlook of 4.2%.[30]

Also, the Congressional Budget Office ("CBO") makes long-term economic projections. The CBO is projecting real GDP growth to be 1.8% during the next

[29] *Id.*

[30] DOE/EIA Annual Energy Outlook 2018 With Projections to 2050, February 2019, Table Macroeconomic Indicators.

six years, with a GDP price inflation outlook of 2.1%. The CBO's six-year outlook for nominal GDP based on this projection is 3.9%.[31]

Moody's Analytics also makes long-term economic projections. In its recent 25-year outlook to 2048, Moody's Analytics is projecting real GDP growth of 2.0% with GDP inflation of 1.9%.[32] Based on these projections, Moody's Analytics is projecting nominal GDP growth of 3.9% over the next 25 years.

The Social Security Administration ("SSA") makes long-term economic projections out to 2095. The SSA's nominal GDP projection, under its "intermediate cost" scenario of approximately 50 years, is 4.4%.[33]

The Economist Intelligence Unit, a division of The Economist and a third-party data provider to Market Intelligence, makes a long-term economic projection out to 2050. The Economist Intelligence Unit is projecting real GDP growth of 1.9% with an inflation rate of 1.9% out to 2050. The real GDP growth projection is in line with the consensus. The long-term nominal GDP projection based on these outlooks is approximately 3.8%.[34]

The real GDP and nominal GDP growth projections made by these independent sources support the use of the consensus for five-year and ten-year projected GDP growth outlooks as a reasonable estimate of market participants' long-term GDP growth.

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[31] *CBO: The Budget and Economic Outlook: 2019-2029*, January 2019.
[32] www.economy.com, *Moody's Analytics Forecast*, April 8, 2019.
[33] www.ssa.gov, "2018 OASDI Trustees Report," Table VI.G4.
[34] *S&P Global Market Intelligence, Economist Intelligence Unit*, downloaded on February 14, 2019.

Q WHAT STOCK PRICE, DIVIDEND, AND GROWTH RATES DID YOU USE IN YOUR MULTI-STAGE GROWTH DCF ANALYSIS?

A I relied on the same 13-week average stock prices and the most recent quarterly dividend payment data discussed above. For stage one growth, I used the consensus analysts' growth rate projections discussed above in my constant growth DCF model. The first stage covers the first five years, consistent with the time horizon of the securities analysts' growth rate projections. The second stage, or transition stage, begins in year 6 and extends through year 10. The second stage growth transitions the growth rate from the first stage to the third stage using a straight linear trend. For the third stage, or long-term sustainable growth stage, starting in year 11, I used a 4.00% long-term sustainable growth rate based on the consensus economists' long-term projected nominal GDP growth rate.

Q WHAT ARE THE RESULTS OF YOUR MULTI-STAGE GROWTH DCF MODEL?

A As shown in Exhibit MPG-14, the average and median DCF returns on equity for my proxy group using the 13-week average stock price are 8.21% and 8.17%, respectively.

Q PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.

A The results from my DCF analyses are summarized in Table 9 below:

TABLE 9

Summary of DCF Results

Description	Proxy Group Average	Proxy Group Median
Constant Growth DCF Model (Analysts' Growth)	9.31%	9.57%
Constant Growth DCF Model (Sustainable Growth)	8.11%	8.20%
Multi-Stage Growth DCF Model	8.21%	8.17%

I conclude that my DCF studies support a return on equity of 9.3% to 9.6%. My recommended point estimate of 9.45% is primarily based on my constant growth DCF estimates, but also considers the results of my other DCF models.

III.E. Risk Premium Model

Q PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

A This model is based on the principle that investors require a higher return to assume greater risk. Common equity investments have greater risk than bonds because bonds have more security of payment in bankruptcy proceedings than common equity and the coupon payments on bonds represent contractual obligations. In contrast, companies are not required to pay dividends or guarantee returns on common equity investments. Therefore, common equity securities are considered to be riskier than bond securities.

This risk premium model is based on two estimates of an equity risk premium. First, I quantify the difference between regulatory commission-authorized returns on common equity and contemporary U.S. Treasury bonds. The difference between the authorized return on common equity and the Treasury bond yield is the risk premium. I estimated the risk premium on an annual basis for each year since January 1986 through March 2019. The authorized returns on equity were based on regulatory

commission-authorized returns for electric utility companies. Authorized returns are typically based on expert witnesses' estimates of the investor-required return at the time of the proceeding.

The second equity risk premium estimate is based on the difference between regulatory commission-authorized returns on common equity and contemporary "A" rated utility bond yields by Moody's. I selected the period 1986 through March 2019 because public utility stocks consistently traded at a premium to book value during that period. This is illustrated in Exhibit MPG-15, which shows the market-to-book ratio since 1986 for the electric utility industry was consistently above a multiple of 1.0x. Over this period, an analyst can infer that authorized returns on equity were sufficient to support market prices that at least exceeded book value. This is an indication that commission authorized returns on common equity supported a utility's ability to issue additional common stock without diluting existing shares. It further demonstrates utilities were able to access equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown in Exhibit MPG-16, the average indicated equity risk premium over U.S. Treasury bond yields has been 5.57%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity for a risk premium methodology.

I incorporated five-year and ten-year rolling average risk premiums over the study period to gauge the variability over time of risk premiums. These rolling average risk premiums mitigate the impact of anomalous market conditions and skewed risk premiums over an entire business cycle. As shown on my Exhibit MPG-16, the five-

year rolling average risk premium over Treasury bonds ranged from 4.25% to 6.72%, while the ten-year rolling average risk premium ranged from 4.38% to 6.57%.

As shown on my Exhibit MPG-17, the average indicated equity risk premium over contemporary "A" rated Moody's utility bond yields was 4.21%. The five-year and ten-year rolling average risk premiums ranged from 2.88% to 5.57% and 3.20% to 5.41%, respectively.

Q DO YOU BELIEVE THAT THE TIME PERIOD USED TO DERIVE THESE EQUITY RISK PREMIUM ESTIMATES IS APPROPRIATE TO FORM ACCURATE CONCLUSIONS ABOUT CONTEMPORARY MARKET CONDITIONS?

A Yes. Contemporary market conditions can change dramatically during the period that rates determined in this proceeding will be in effect. A relatively long period of time where stock valuations reflect premiums to book value indicates that the authorized returns on equity and the corresponding equity risk premiums were supportive of investors' return expectations and provided utilities access to the equity markets under reasonable terms and conditions. Further, this time period is long enough to smooth abnormal market movement that might distort equity risk premiums. While market conditions and risk premiums do vary over time, this historical time period is a reasonable period to estimate contemporary risk premiums.

Alternatively, some studies, such as Duff & Phelps referred to later in this testimony, have recommended that use of "actual achieved investment return data" in a risk premium study should be based on long historical time periods. The studies find that achieved returns over short time periods may not reflect investors' expected returns due to unexpected and abnormal stock price performance. Short-term, abnormal actual returns would be smoothed over time and the achieved actual investment returns over long time periods would approximate investors' expected

returns. Therefore, it is reasonable to assume that averages of annual achieved returns over long time periods will generally converge on the investors' expected returns.

My risk premium study is based on data that inherently relied on investor expectations, not actual investment returns, and, thus, need not encompass a very long historical time period.

Q BASED ON THIS DATA, WHAT RISK PREMIUM HAVE YOU USED TO ESTIMATE CEHE'S COST OF COMMON EQUITY IN THIS PROCEEDING?

A The equity risk premium should reflect the relative market perception of risk in the utility industry today. I have gauged investor perceptions in utility risk today in Exhibit MPG-18, where I show the yield spread between utility bonds and Treasury bonds over the last 39 years. As shown in this exhibit, the average utility bond yield spreads over Treasury bonds for "A" and "Baa" rated utility bonds for this historical period are 1.49% and 1.93%, respectively. The utility bond yield spreads over Treasury bonds for "A" and "Baa" rated utilities for 2018 were 1.14% and 1.56%, respectively. Similarly, the "A" and "Baa" utility spreads through March 2019 are 1.24% and 1.76%, respectively. The current average "A" rated utility bond yield spread over Treasury bond yields is lower than the 39-year average spread. The current "Baa" rated utility bond yield spread over Treasury bond yields is lower than the 39-year average spread.

A current 13-week average "A" rated utility bond yield of 4.14% when compared to the current Treasury bond yield of 2.96%, as shown in Exhibit MPG-19, implies a yield spread of 118 basis points. This current utility bond yield spread is lower than the 39-year average spread for "Baa" rated utility bonds of 4.62%. The current spread for the "Baa" rated utility bond yield of 1.66% is also lower than the 39-year average spread of 1.93%.

These utility bond yield spreads are evidence that the market perceives utility investment risk as relatively low compared to historical valuation and corporate security valuation. This relative valuation and pricing demonstrate that utilities continue to have strong access to capital and at low costs in the current market.

Q IS THERE MARKET EVIDENCE TO HELP GAUGE MARKET RISK PREMIUMS BASED ON OBSERVABLE MARKET EVIDENCE?

A Yes. Market data does illustrate how the market is pricing investment risk, and gauging the current demands for returns based on securities of varying levels of investment risk. This market evidence includes bond yield spreads for different bond return ratings as implied by the yield spreads for Treasury, corporate and utility bonds. These spreads provide an indication of the market's return requirement for securities of different levels of investment risk and required risk premiums.

Table 10 below shows the utility and corporate bond spreads relative to Treasury bond yields.

TABLE 10

Comparison of Yield Spreads Over Treasury Bonds

	Utility		Corporate	
Description	A	Baa	Aaa	Baa
Average Historical Spread	1.49%	1.93%	0.84%	1.93%
2017 Spread	1.10%	1.48%	0.85%	1.55%
2018 Spread	1.14%	1.56%	0.82%	1.69%
2019 Spread	1.24%	1.76%	0.82%	1.95%

Source: Exhibit MPG-18.

As shown above in Table 10, the average historical bond yield spread over the period 1980-March 2019 shows a fairly divergent spread for utilities relative to

corporate bonds. Specifically, the average historical utility bond yield spread is greater than the current yield spread based on 2017-2019 data. This is an indication that the market is placing a higher value on utility securities currently, and indicating a preference for lower-risk investment securities. Specifically, the 39-year average yield spread for A-rated utilities of 1.49% is greater than the first quarter of 2019 average spread of 1.24%. Again, this indicates the market is paying a premium for a lower-risk utility security now compared to the past. This phenomenon is also evident in spreads for general corporate securities. An Aaa-rated corporate bond 39-year average spread is 0.84%, which is comparable to the average spread in 2017 and slightly higher than the 2018 and 2019 spreads of 0.82%. For higher-risk bonds, utility Baa and corporate bonds reflect reasonably consistent yield spreads, suggesting that these higher-risk utility and corporate bond securities are not receiving the same premium valuation as are the lower-risk A-rated and Aaa-rated utility and corporate bond securities.

A relatively low yield for utility and corporate bonds is also reflected in outlooks of real returns on these bond yields compared to the past. Over the period 1926-2018, long-term corporate bond yields have earned around 5.9%, compared to inflation of around 3.0%.[35] This implies a historical real return on long-term corporate bonds of around 2.9%. In 2017-2019, long-term corporate bonds rated Aaa averaged around 3.80%. At that time, future inflation outlooks over the long term were expected to be around 2.0% which implies a current real return outlook on long-term corporate bonds of only 1.80%. Again, this indicates that bond yields are being priced at a premium by the market participants.

This information supports the finding that higher-risk securities are being valued to produce higher-risk spreads relative to low-risk securities in the current marketplace.

[35] *Duff & Phelps 2019 SBBI Yearbook* at 6-17.

As such, I believe this information supports using an above-average risk premium in the current marketplace accurately estimate the market's required return an investment in a higher-risk security = (common stock) compared to a lower-risk security (utility and Treasury bond yields). For these reasons, I believe an above-average risk premium is supported by observable market evidence in this proceeding.

Q WHAT IS YOUR RECOMMENDED RETURN FOR CEHE BASED ON YOUR RISK PREMIUM STUDY?

A I am recommending that slightly more weight be given to the high-end risk premium estimates than the low-end. Hence, I propose to provide 70% weight to my high-end risk premium estimates and 30% to the low-end. Applying these weights, the risk premium for Treasury bond yields would be approximately 6.0%,[36] which is considerably higher than the 33-year average risk premium of 5.57% and reasonably reflective of the 3.2% projected Treasury bond yield. A Treasury bond risk premium of 6.0% and projected Treasury bond yield of 3.2% produce a risk premium estimate of 9.20%.

Similarly, applying these weights to the utility risk premium indicates a risk premium of 4.80%.[37] This risk premium is above the 33-year historical average risk premium of 4.21%. Adding this risk premium to the current observable Baa utility bond yield of 4.62% produces an estimated return on equity of approximately 9.42%, rounded to 9.40%.

Based on this methodology, my Treasury bond risk premium and my utility bond risk premium indicate a return in the range of 9.20% to 9.40%, with a midpoint of 9.30%.

[36](4.25% * 30%) + (6.72% * 70%) = 5.98%, rounded to 6.0%.
[37](2.88% * 30%) + (5.57% * 70%) = 4.76%, rounded to 4.80%.

III.F. Capital Asset Pricing Model ("CAPM")

Q PLEASE DESCRIBE THE CAPM.

A The CAPM method of analysis is based upon the theory that the market-required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. This relationship between risk and return can be expressed mathematically as follows:

$R_i = R_f + B_i \times (R_m - R_f)$ where:

R_i = Required return for stock i
R_f = Risk-free rate
R_m = Expected return for the market portfolio
B_i = Beta - Measure of the risk for stock

The stock-specific risk term in the above equation is beta. Beta represents the investment risk that cannot be diversified away when the security is held in a diversified portfolio. When stocks are held in a diversified portfolio, stock-specific risks can be eliminated by balancing the portfolio with securities that react in the opposite direction to firm-specific risk factors (e.g., business cycle, competition, product mix, and production limitations).

The risks that cannot be eliminated when held in a diversified portfolio are non-diversifiable risks. Non-diversifiable risks are related to the market in general and referred to as systematic risks. Risks that can be eliminated by diversification are non-systematic risks. In a broad sense, systematic risks are market risks and non-systematic risks are business risks. The CAPM theory suggests the market will not compensate investors for assuming risks that can be diversified away. Therefore, the only risk investors will be compensated for are systematic, or non-diversifiable, risks. The beta is a measure of the systematic, or non-diversifiable risks.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

A The CAPM requires an estimate of the market risk-free rate, CEHE's beta, and the market risk premium.

Q WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?

A As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield is 3.20%.[38] The current 30-year Treasury bond yield is 2.96%, as shown in Exhibit MPG-19. I used *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield of 3.20% for my CAPM analysis.

Q WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE OF THE RISK-FREE RATE?

A Treasury securities are backed by the full faith and credit of the United States government so long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that of common stock. As a result, investor-anticipated long-run inflation expectations are reflected in both common stock required returns and long-term bond yields. Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term bond yield is a reasonable estimate of the nominal risk-free rate included in common stock returns.

Treasury bond yields, however, do include risk premiums related to unanticipated future inflation and interest rates. As such, in this regard, a Treasury bond yield is not a risk-free rate. Risk premiums related to unanticipated inflation and interest rates reflect systematic market risks. Consequently, for companies with betas

[38] *Blue Chip Financial Forecasts*, May 1, 2019 at 2.

less than 1.0, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an overstated estimate of the CAPM return.

Q WHAT BETA DID YOU USE IN YOUR ANALYSIS?

A As shown on my Exhibit MPG-20, the average beta of my proxy group is 0.60. This means that my proxy group is less risky than the market as a whole. On page 2 of Exhibit MPG-20, I review the long-term trend of *Value Line* betas reported for the proxy groups companies. As shown on that page, the proxy group's betas generally range between 0.65 and 0.75, or average of about 0.70. The current beta of around 0.60 has trended downward more recently, but is close to the average historical beta of 0.70. I believe that the decline in utility stock betas is mostly attributable to the market's continued premium paid for low-risk securities. As the market has declined over the last several months, utility stock prices have actually been quite robust. This suggests the market continues to recognize utility investments as safe haven investments and pay premiums for these securities during times of economic uncertainty. However, this behavior has caused utility betas to come down to a level below the historical norm. For this reason, I will use the average utility beta in my CAPM.

Q HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATE?

A I derived two market risk premium estimates: a forward-looking estimate and one based on a long-term historical average.

The forward-looking estimate was derived by estimating the expected return on the market (as represented by the S&P 500) and subtracting the risk-free rate from this estimate. I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term historical arithmetic average real return on the market. The real return on the market represents the achieved return above the rate of inflation.

Duff & Phelps' *2019 SBBI Yearbook* estimates the historical arithmetic average real market return over the period 1926 to 2018 to be 8.8%.[39] A current consensus for projected inflation, as measured by the Consumer Price Index, is 2.1%.[40] Using these estimates, the expected market return is 11.1%.[41] The market risk premium then is the difference between the 11.1% expected market return and my 3.2% risk-free rate estimate, or 7.9%.

My historical estimate of the market risk premium was also calculated by using data provided by Duff & Phelps in its *2019 SBBI Yearbook*. Over the period 1926 through 2018, the Duff & Phelps study estimated that the arithmetic average of the achieved total return on the S&P 500 was 11.9%[42] and the total return on long-term Treasury bonds was 5.9%.[43] The indicated market risk premium is 6.0% (11.9% - 5.9% = 6.0%).

The long-term government bond yield of 5.9% occurred during a period of inflation of approximately 3.0%, thus implying a real return on long-term government bonds of 2.9%.

Q HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE COMPARE TO THAT ESTIMATED BY DUFF & PHELPS?

A Duff & Phelps makes several estimates of a forward-looking market risk premium based on actual achieved data from the historical period of 1926 through 2018 as well as normalized data. Using this data, Duff & Phelps estimates a market risk premium derived from the total return on the securities that comprise the S&P 500, less the

[39]Duff & Phelps, *2019 SBBI Yearbook at 6-18.*
[40]*Blue Chip Financial Forecasts*, May 1, 2019 at 2.
[41]{ (1 + 0.088) * (1 + 0.021) – 1 } * 100.
[42]Duff & Phelps, *2019 Yearbook at 6-17.*
[43]*Id.*

income return on Treasury bonds. The total return includes capital appreciation, dividend or coupon reinvestment returns, and annual yields received from coupons and/or dividend payments. The income return, in contrast, only reflects the income return received from dividend payments or coupon yields.

Duff & Phelps' range is based on several methodologies. First, Duff & Phelps estimates a market risk premium of 6.91% based on the difference between the total market return on common stocks (S&P 500) less the income return on 20-year Treasury bond investments over the 1926-2018 period.[44]

Second, Duff & Phelps used the Ibbotson & Chen supply-side model which produced a market risk premium estimate of 6.14%.[45]

Duff & Phelps explains that the historical market risk premium based on the S&P 500 was influenced by an abnormal expansion P/E ratios relative to earnings and dividend growth during the period, primarily over the last 30 years. Duff & Phelps believes this abnormal P/E expansion is not sustainable.[46] Therefore, Duff & Phelps adjusted this market risk premium estimate to normalize the growth in the P/E ratio to be more in line with the growth in dividends and earnings.

Finally, Duff & Phelps develops its own recommended equity, or market risk premium by employing an analysis that takes into consideration a wide range of economic information, multiple risk premium estimation methodologies, and the current state of the economy by observing measures such as the level of stock indices and corporate spreads as indicators of perceived risk. Based on this methodology, and utilizing a "normalized" risk-free rate of 3.5%, Duff & Phelps concludes the current

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[44] *Duff & Phelps 2019 Valuation Handbook* at 3-1. The numbers are shown on the summary but the details are not available.

[45] *Id.*

[46] *Duff & Phelps 2018 Valuation Handbook* at 3-43.

expected, or forward-looking, market risk premium is 5.5%, implying an expected return on the market of 9.0%.[47]

Importantly, Duff & Phelps' market risk premiums are measured over a 20-year Treasury bond. Because I am relying on a projected 30-year Treasury bond yield, the results of my CAPM analysis should be considered conservative estimates for the cost of equity.

Q HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE COMPARE TO THAT ESTIMATED BY DUFF & PHELPS?

A The Duff & Phelps analyses indicate a market risk premium falls somewhere in the range of 5.5% to 6.9%. My market risk premium falls in the range of 6.0% to 7.9%. My average market risk premium of approximately 7.0% is at the high end of the Duff & Phelps range.

Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A As shown in Exhibit MPG-21, based on my low market risk premium of 6.0% and my high market risk premium of 7.9%, a risk-free rate of 3.20%, and a historical average utility beta of 0.70, my CAPM analysis produces a return in the range of 7.40% to 8.73%. Based on my assessment of risk premiums in the market, as discussed above, I will place primary reliance on my high-end CAPM return estimates. This produces a recommended CAPM return estimate of 8.7%.

The projected risk-free rate of 3.2% aligns with an outlook for future inflation of around 2%. This implies a relatively high premium for low-risk Treasury securities in the market, and indicates the market is still paying a premium for relatively low-risk

[47] *Duff & Phelps 2019 Valuation Handbook* at 3-1.

securities, thus indicating that the market risk premium is relatively high in the current market. Based on this assessment of observable market evidence, I recommend the high-end CAPM return estimate because it closely aligns the market risk premium with the prevailing risk-free rate. I recommend a CAPM return of approximately 8.7%.

III.G. Return on Equity Summary

Q BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR CEHE?

A Based on my analyses, I estimate CEHE's current market cost of equity to be 9.25%.

TABLE 11

Return on Common Equity Summary

Description	Results
DCF	9.45%
Risk Premium	9.30%
CAPM	8.70%

My recommended return on common equity of 9.25% is the midpoint of my estimated range of 9.00% to 9.50%. My low end is based on my CAPM and risk premium, and my high end is based on my DCF. My return on equity estimates reflect observable market evidence, the impact of Federal Reserve policies on current and expected long-term capital market costs, an assessment of the current risk premium built into current market securities, and a general assessment of the current investment risk characteristics of the electric utility industry and the market's demand for utility securities.

III.H. Financial Integrity

Q WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT AN INVESTMENT GRADE BOND RATING FOR CEHE?

A Yes. I have reached this conclusion by comparing the key credit rating financial ratios for CEHE at my proposed return on equity and embedded debt cost and CEHE's proposed capital structure to S&P's benchmark financial ratios using S&P's new credit metric ranges.

Q PLEASE DESCRIBE THE MOST RECENT S&P FINANCIAL RATIO CREDIT METRIC METHODOLOGY.

A S&P publishes a matrix of financial ratios corresponding to its assessment of the business risk of utility companies and related bond ratings. On May 27, 2009, S&P expanded its matrix criteria by including additional business and financial risk categories.[48]

Based on S&P's most recent credit matrix, the business risk profile categories are "Excellent," "Strong," "Satisfactory," "Fair," "Weak," and "Vulnerable." Most utilities have a business risk profile of "Excellent" or "Strong."

The financial risk profile categories are "Minimal," "Modest," "Intermediate," "Significant," "Aggressive," and "Highly Leveraged." Most of the utilities have a financial risk profile of "Aggressive." CEHE has an "Excellent" business risk profile and an "Intermediate" financial risk profile.

[48]S&P updated its 2008 credit metric guidelines in 2009, and incorporated utility metric benchmarks with the general corporate rating metrics. *Standard & Poor's RatingsDirect*: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

Q PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK RATIOS IN ITS CREDIT RATING REVIEW.

A S&P evaluates a utility's credit rating based on an assessment of its financial and business risks. A combination of financial and business risks equates to the overall assessment of CEHE's total credit risk exposure. On November 19, 2013, S&P updated its methodology. In its update, S&P published a matrix of financial ratios that defines the level of financial risk as a function of the level of business risk.

S&P publishes ranges for primary financial ratios that it uses as guidance in its credit review for utility companies. The two core financial ratio benchmarks it relies on in its credit rating process include: (1) Debt to Earnings Before Interest, Taxes, Depreciation and Amortization ("EBITDA"); and (2) Funds From Operations ("FFO") to Total Debt.[49]

Q HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?

A I calculated each of S&P's financial ratios based on CEHE's cost of service for its retail operations in its Texas service territory. While S&P would normally look at total consolidated CEHE financial ratios in its credit review process, my investigation in this proceeding is not the same as S&P's. I am attempting to judge the reasonableness of my proposed cost of capital for rate-setting in CEHE's retail regulated utility operations. Hence, I am attempting to determine whether my proposed rate of return will in turn support cash flow metrics, balance sheet strength, and earnings that will support an investment grade bond rating and CEHE's financial integrity.

[49] *Standard & Poor's RatingsDirect*: "Criteria: Corporate Methodology," November 19, 2013.

Q DID YOU INCLUDE ANY OFF-BALANCE SHEET DEBT EQUIVALENTS?

A No, I did not. While I would usually consider off-balance sheet debt allocated to utilities jurisdictional cost of service, in response to Request No. TIEC03-10, CEHE stated that it does not have any off-balance sheet debt obligations.

Q PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS AS IT RELATES TO CEHE'S TEXAS RETAIL OPERATIONS.

A The S&P financial metric calculations for CEHE at a 9.25% return are developed on Exhibit MPG-22, page 1. The credit metrics produced below, with CEHE's financial risk profile from S&P of "Intermediate" and business risk profile of "Excellent," will be used to assess the strength of the credit metrics based on CEHE's retail operations in the state of Texas.

CEHE's adjusted total debt ratio, based on its requested capital structure is approximately 60%. However, it is reasonable because of CEHE's unique low business risk attributes and S&P applying the Low Volatility metrics table to CEHE relative to the Medial Volatility for other regulated utilities. This allows CEHE to finance with more financial leverage and maintain its investment grade bond rating.

Based on an equity return of 9.25%, CEHE will be provided an opportunity to produce a Debt to Earnings Before Interest, Taxes, Depreciation and Amortization ("EBITDA") ratio of 4.6x. This is within S&P's "Significant" guideline range of 4.0x to 5.0x,[50] which would support CEHE's credit rating based on S&P's reported business risk profile score of "Excellent" for CEHE.

CEHE's retail operations FFO to total debt coverage at a 9.25% equity return is 16%, which is within S&P's "Significant" metric guideline range of 13% to 23%. Again,

[50] *Id.*

this supports an FFO/total debt ratio that will support a ratio consistent with an A- rating with CEHE's "Excellent" business profile score from S&P.

IV. RESPONSE TO CEHE WITNESS MR. ROBERT B. HEVERT

IV.A. Summary of Rebuttal

Q WHAT RETURN ON COMMON EQUITY IS CEHE PROPOSING FOR THIS PROCEEDING?

A Mr. Hevert is recommending a return on equity of 10.40% based on his market-based model results that fall in the range of 10.00% to 10.75%. His recommended return on equity is based on: (1) a constant growth Discounted Cash Flow ("DCF") analysis, (2) a traditional Capital Asset Pricing Model ("CAPM"), and (3) a Bond Yield Plus Risk Premium methodology. Mr. Hevert also performs an Expected Earnings analysis which he uses to place his recommendation within his proposed return on equity range.[51]

Q ARE MR. HEVERT'S RETURN ON EQUITY ESTIMATES REASONABLE?

A No. Mr. Hevert's estimated return on equity is overstated and should be rejected. Mr. Hevert's analyses produce excessive results for various reasons, including the following:

1. His constant growth DCF results are based on unsustainably high growth rates;
2. His CAPM is based on inflated market risk premiums; and
3. His Bond Yield Plus Risk Premium studies are based on inflated utility equity risk premiums.

Mr. Hevert also did an Expected Earnings analysis as a gauge to help formulate his recommended return on equity and point estimate, however he appears to have used

[51]Hevert Direct at 7.

this external to his marked-based model as described above. Finally, Mr. Hevert also estimated a flotation cost return on equity adder of 8 basis points, but again he did not include this directly in his DCF, CAPM and Risk Premium results. Rather, he used this to attempt to gauge where his recommended return on equity would be within his market-based model return estimates. Hence, while it was not an explicit adder, it clearly appears to be included in his recommended return on equity.

Q PLEASE SUMMARIZE MR. HEVERT'S RETURN ON EQUITY ESTIMATES.

A Mr. Hevert's return on equity estimates are summarized in Table 12 below. In Column 2, I show the results with prudent and sound adjustments to correct the flaws referenced above. With such adjustments to his proxy group's DCF, CAPM, and Risk Premium return estimates, Mr. Hevert's own studies show that my 9.25% recommended return on equity for CEHE is reasonable.

TABLE 12

Hevert's Return on Equity Estimates

Description	Mean[1] (1)	Adjusted (2)
Constant Growth DCF		
30-Day Average	9.22%	9.22%
90-Day Average	9.24%	9.24%
180-Day Average	9.32%	9.32%
Average Constant Growth DCF	9.25%	9.25%
CAPM Results (Bloomberg Beta)		
Current 30-Yr Treasury (BL – 3.03%)	8.37%	6.96%
Current 30-Yr Treasury (*VL* – 3.03%)	10.05%	6.96%
Near-Term Projected 30-Yr Treasury (BL – 3.33%)	8.66%	7.26%
Near-Term Projected 30-Yr Treasury (VL – 3.33%)	10.35%	7.26%
CAPM Results (*Value Line* Beta)		
Current 30-Yr Treasury (BL – 3.03%)	9.27%	7.63%
Current 30-Yr Treasury (*VL* – 3.03%)	11.24%	7.63%
Near-Term Projected 30-Yr Treasury (BL – 3.33%)	9.57%	7.93%
Near-Term Projected 30-Yr Treasury (VL – 3.33%)	11.54%	7.93%
Risk Premium		
Current 30-Yr Treasury (3.03%)	9.93%	9.13%
Near-Term Projected 30-Yr Treasury (3.33%)	9.98%	9.43%
Long-Term Projected 30-Yr Treasury (4.05%)	10.17%	Reject
Expected Earnings	10.27%	Reject
Range	10.00% to 10.75%	
Recommended ROE	10.40%	9.25%

Sources: [1]Hevert Direct at 7; Exhibits RBH-1 through RBH-5.

As noted in Table 12 above, certain of Mr. Hevert's estimates are reasonable, while others require modification, and finally, certain adjustments should be rejected outright. Corrections and improvements to the accuracy of Mr. Hevert's return on equity estimates will be described here.

IV.B. Hevert DCF

IV.B.1. Hevert Constant Growth DCF

Q PLEASE DESCRIBE MR. HEVERT'S CONSTANT GROWTH DCF RETURN ESTIMATES.

A His constant growth DCF returns are developed on his Exhibits RBH-1. Mr. Hevert's constant growth DCF models are based on consensus growth rates published by Zacks and First Call and individual growth rate projections made by *Value Line*.

He relied on dividend yield calculations based on average stock prices over three different time periods: 30-day, 90-day, and 180-day ending February 15, 2019 – all reflecting one-half year dividend growth adjustments.

Q ARE THE CONSTANT GROWTH DCF RESULTS PRODUCED BY MR. HEVERT REASONABLE?

A Mr. Hevert's constant growth DCF mean results generally support a return on equity no higher than 9.30%, which is similar to the results of my constant growth DCF study discussed above.

Similar to my constant growth DCF result, Mr. Hevert's constant growth DCF return estimates are not reasonable estimates because they are based on a proxy group average growth rate of 5.80%, which is an unsustainable growth rate because it significantly exceeds the projected long-term U.S. GDP growth of 4.00%. As such, his mean constant growth DCF return estimate is at best a high-end estimate of CEHE's current market cost of equity.

IV.B.2. Hevert Multi-Stage Growth DCF

Q DID MR. HEVERT PERFORM A MULTI-STAGE GROWTH DCF ANALYSIS?

A No, he did not. It has been Mr. Hevert's standard practice to perform a multi-stage DCF analysis but in this regulatory proceeding he deviated from his standard approach.

Q DID MR. HEVERT PROVIDE ANY EXPLANATION ON WHY HE CHOSE NOT TO DEVELOP A MULTI-STAGE DCF?

A Not in his testimony. However, in response to Request No. TIEC03-17 he stated that the multi-stage model does not add significantly more information relative to the models he has included.

Q DO YOU BELIEVE THAT A MULTI-STAGE DCF MODEL IS APPROPRIATE TO CONSIDER IN THIS REGULATORY PROCEEDING?

A Yes, I do. As discussed in regard to my own DCF study, the current growth rates are significantly higher than the long-term sustainable growth as measured by the consensus analysts' GDP growth rate. Therefore, using the long-term GDP growth rate as a conservative projection for the maximum sustainable growth rate is logical, and is generally consistent with academic and economic practitioner accepted practices as discussed above.

Q CAN MR. HEVERT'S MODEL BE EXPANDED TO INCORPORATE A REASONABLE LONG-TERM SUSTAINABLE GROWTH RATE?

A Yes. I have developed a multi-stage DCF model using Mr. Hevert's growth rate, dividend and stock price inputs by applying the consensus economists' GDP growth outlook as a long-term sustainable growth of 4.0%

The multi-stage growth DCF return estimates are developed on my Exhibit MPG-23. The return on equity produced by the multi-stage DCF model is approximately 8.0%.

IV.B.3. DCF Returns are Reliable and Accurate

Q DOES MR. HEVERT MAKE COMMENTS CONCERNING THE RELIABILITY OF MARKET-BASED MODELS TO MEASURE A FAIR RETURN ON EQUITY FOR CEHE?

A Yes. Mr. Hevert opines that the traditional DCF model is not producing reasonable results at this time due to the current capital market conditions.[52] He goes on to state that current market conditions reflect a low interest rate environment, which affects security valuation and yields relative to historical levels. He also opines that the market has an expectation of higher interest rates.[53]

Q HAS MR. HEVERT IDENTIFIED FACTORS THAT ARE DIFFERENT IN THIS CASE COMPARED TO OTHER RATE CASES OVER THE LAST FIVE TO TEN YEARS?

A No. As detailed later, economists have consistently been projecting increases in interest rates relative to current observable interest rates over approximately the last five years. They were doing so even during CEHE's last rate case. However, those projections for increased interest rates have turned out to be inaccurate. Instead, interest rates have remained relatively stable and at low levels for approximately the last five to ten years. Also, I show that projections for interest rates over the next five to ten years have been moderated by independent consensus economists. This is

[52] Hevert Direct at 5, 9, 61-63.
[53] *Id.* at 12.

clear evidence that the market now is embracing the sustainability of relatively low capital market costs in the current market relative to what independent economists have projected in prior periods. Again, this shows that DCF return estimates continue to be reliable and accurate. I also believe a comparison of the components of the DCF return for utilities generally to other income return investment options and growth investment options shows that the results of DCF models are producing reliable and accurate estimates of the current market cost for utility companies.

Q PLEASE EXPLAIN WHY YOU BELIEVE THE DCF MODEL IS PRODUCING RELIABLE RESULTS FOR UTILITY COMPANIES WHEN THE DCF RETURN COMPONENT IS COMPARED TO ALTERNATIVE INVESTMENTS.

A The DCF model is producing an economically logical estimate of the current market cost of equity and a return that is comparable with observable returns in alternative investments of comparable risk. The DCF model sums the observable dividend yield on utility stocks and then adds to that an estimate of expected growth. These two components yield DCF returns that can be compared to alternative investments to demonstrate their reasonableness.

The current dividend yield of an electric utility stock (3.51%) is lower but comparable to the yield on "A" rated utility bonds (4.25%) as shown my Exhibit MPG-2. Because electric stock dividends can grow over time, and utility bond yield coupons are fixed, historically utility stock dividend yields are lower than observable utility bond yields. The current yield spread of around 74 basis points is actually high relative to historical averages, as described later in this testimony. This relatively narrow spread between A-rated utility bonds and utility stock dividend yields is an indication that the yield component, or income component, on a utility stock is competitive with alternative

income returns such as A-rated utility bond yields. This is an indication that the yield component of a DCF return is comparable with alternative investments.

Specifically, as shown on Exhibit MPG-2, the historical average yield spread between utility bonds and utility stock dividends has been 1.01%. Currently, this yield spread is almost identical (0.74%). This indicates the DCF income return on utility stocks (dividend yield) is competitive with the income return available on utility bond investments.

The growth component of the DCF return relates to earnings and stock growth over time. The growth outlook for utility stocks is not depressed generally, but rather provides a robust outlook for dividends and stock price growth. The DCF return is not understated due to the DCF growth rate component. As shown on my Exhibit MPG-2, analysts' current growth rate outlooks for dividends and earnings are around 6.59% and 5.26%, respectively.

As shown on Exhibit MPG-2, the annual growth in dividends for utilities over the last 13 years has been approximately 4.3%. A forward growth rate of 5.4%, as shown in Exhibit MPG-8, is higher than the realized historical growth. Also, utility earnings growth is expected to be considerably higher than the growth of the U.S. Gross Domestic Product ("GDP"), which generally is regarded as the maximum sustainable growth of the market in general. Going forward, long-term sustainable growth for equity investments is around 4.0%, as described above. Based on these factors, the growth rate component of a regulated utility DCF return is quite robust and produces a highly competitive DCF return estimate.

For these reasons, both dividend yield and growth components of a utility DCF indicate an economically logical return estimate that is competitive with comparably risky alternative investments.

IV.C. Mr. Hevert's CAPM Studies

Q PLEASE DESCRIBE MR. HEVERT'S CAPM ANALYSIS.

A As indicated above, the CAPM analysis is based upon the theory that the market required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. The risk premium associated with the specific security is expressed mathematically as:

Bi x (Rm - Rf) where:

Bi = Beta - Measure of the risk for stock
Rm = Expected return for the market portfolio
Rf = Risk-free rate

Q PLEASE DESCRIBE THE ISSUES YOU HAVE WITH MR. HEVERT'S CAPM STUDY.

A I have two primary issues with Mr. Hevert's CAPM study. First, I believe the market risk premiums he used in all of his CAPM studies are overstated because they do not reflect a reasonable estimate of the expected return on the market. My second concern, specifically with the market risk premium used in Mr. Hevert's CAPM return estimates using a projected risk-free rate, is that he does not measure the market risk premium in relationship to the projected risk-free rate. Rather, all market risk premium estimates are based on his current risk-free rate projections. This causes a mismatch in the market risk premium estimates used in Mr. Hevert's CAPM projections that are based on projected risk-free rates.

Q PLEASE DESCRIBE MR. HEVERT'S MARKET RISK PREMIUMS.

A Mr. Hevert derived his market risk premiums by conducting a DCF analysis for the market. Mr. Hevert used two market risk premium estimates. They are DCF-derived market risk premiums of 10.72% (Bloomberg) and 14.10% (*Value Line*), which are

based on market DCF returns of 13.75% and 17.14%, respectively, less the current 30-year Treasury bond yield of 3.03%.[54]

Q WHAT ISSUES DO YOU HAVE WITH MR. HEVERT'S DCF-DERIVED MARKET RISK PREMIUM ESTIMATES?

A Mr. Hevert's DCF-derived market risk premiums are based on market returns of approximately 13.75% and 17.14%, which consist of growth rate components of approximately 11.63% and 14.82% and a market-weighted expected dividend yield of approximately 2.12% and 2.32%, respectively.[55] As discussed above with respect to my own DCF model, the DCF model requires a long-term sustainable growth rate. Mr. Hevert's sustainable market growth rates of approximately 11.63% and 14.82% are far too high to be a rational outlook for sustainable long-term market growth. These growth rates are more than two times the growth rate of the U.S. GDP long-term growth outlook of 4.00%.

As a result of these unreasonable long-term market growth rate estimates, Mr. Hevert's market DCF returns used within his CAPM analysis are inflated and not reliable. Consequently, Mr. Hevert's 10.72% (Bloomberg) and 14.10% (*Value Line*) market risk premiums should be given minimal weight in estimating CEHE's CAPM-based cost of common equity.

Q DO HISTORICAL ACTUAL RETURNS ON THE MARKET SUPPORT MR. HEVERT'S PROJECTED MARKET RETURNS?

A No. This is significant because Mr. Hevert does rely on historical market returns to produce real returns on the market for use in developing his GDP growth forecast in

[54]Exhibit RBH-2.
[55]*Id.* (13.75% = 11.63% + 2.12% and 17.14% = 14.82% + 2.32%).

his DCF study. Using the same line of logic, historical data shows just how unreasonable Mr. Hevert's projected DCF return on the market is going forward.

Q PLEASE EXPLAIN.

A Duff & Phelps estimates the actual capital appreciation for the S&P 500 over the period 1926 through 2018 to have been 5.8% to 7.7%.[56] This compares to Mr. Hevert's projected growth of the market of 11.63% to 14.82%.

Further, historically the geometric growth of the market of 5.8%[57] has reflected geometric growth of GDP over this same time period of approximately 6.1%.

This review of historical data establishes two facts very clearly. First, historical, actual achieved growth has been substantially less than projected by Mr. Hevert. Second, historical growth of the market has tracked historical growth of the U.S. GDP. Projected growth of the U.S. GDP now is closer to the 4.0% to 4.5% range. All of this information strongly supports the conclusion that Mr. Hevert's projected growth on the market of 11.63% to 14.82% is substantially overstated. While I do not endorse the use of an historical growth rate to draw assessments of the market's forward-looking growth rate outlooks, this data can be used to show how the market return estimates produced by Mr. Hevert are unreasonable and inflated.

Q PLEASE EXPLAIN WHY MR. HEVERT'S MARKET RETURN ESTIMATES ARE UNREASONABLE AND INFLATED.

A Mr. Hevert has made an error in the estimate of his market risk premium. Mr. Hevert measures the market risk premium based on his DCF return on the market less his

[56] Duff & Phelps, *2019 SBBI Yearbook* at 6-17.
[57] *Id.*

current risk-free rate estimate of 3.03%.[58] He then relies on the market risk premiums of 10.72% and 14.10% as risk premium estimates used in his CAPM study on his Exhibit RBH-5. The error in his calculation is that the market risk premium that corresponds with a risk-free rate of 3.03% should not be the same as the market risk premium that corresponds with a risk-free rate of 3.33% as he uses on his Exhibit RBH-4. Rather, the market risk premium that corresponds with a risk-free rate of 3.33% should be the difference between his market return estimate of 13.75% and 3.33%, or 10.42%, and his market return estimate of 17.14% less his 3.33% risk-free rate, or 13.81%. In other words, Columns 3 and 4 of lines "Near-Term Projected 30-Year Treasury" of Mr. Hevert's Exhibit RBH-4 are overstated. Overstating the market risk premium in his CAPM study where he uses a projected Treasury bond yield produces a flawed and erroneous result that overstates a fair CAPM return estimate for CEHE in this proceeding.

Q CAN MR. HEVERT'S CAPM ANALYSIS BE REVISED TO REFLECT A MORE REASONABLE MARKET RISK PREMIUM AND RECENT RISK-FREE RATES?

A Yes. Using Mr. Hevert's risk-free rates of 3.03% and 3.33%, the average Bloomberg and *Value Line* beta estimates of 0.497 and 0.582,[59] respectively, and my calculated high-end market risk premium of 7.9%, Mr. Hevert's CAPM would be no higher than 7.9%.

[58]Exhibit RBH-2.
[59]Exhibit RBH-4.

IV.D. Bond Yield Plus ("BYP") Risk Premium

Q PLEASE DESCRIBE MR. HEVERT'S BYP RISK PREMIUM METHODOLOGY.

A As shown on his Exhibit RBH-5, Mr. Hevert constructs a risk premium return on equity estimate based on the premise that equity risk premiums are inversely related to interest rates. He estimates the average electric equity risk premiums of 4.63% over the period January 1980 through January 2019. He then applies a regression formula to the current, near-term, and long-term projected 30-year Treasury bond yields of 3.03%, 3.33%, and 4.05% to produce electric equity risk premiums of 6.90%, 6.65%, and 6.12%, respectively. Thus, he calculates electric return on equity estimates of 9.93%, 9.98%, and 10.17%, respectively.

Q IS MR. HEVERT'S BYP RISK PREMIUM METHODOLOGY REASONABLE?

A No. Mr. Hevert contends that there is a simplistic inverse relationship between equity risk premiums and interest rates without any regard to differences in investment risk. Academic studies are quite clear that interest rates are a relevant factor in assessing current market equity risk premiums, but the risk premium ties more specifically to the market's perception of investment risk of debt and equity securities, and not simply changes in interest rates.

More specifically, while academic studies have shown that, in the past, there has been an inverse relationship among these variables, researchers have found that the relationship changes over time and is influenced by changes in perception of the

risk of bond investments relative to equity investments, and not simply changes to interest rates.[60]

In the 1980s, equity risk premiums were inversely related to interest rates, but that was likely attributable to the interest rate volatility that existed at that time. As such, when interest rates were more volatile, perceptions of bond investment risk increased relative to the investment risk of equities. This changing investment risk perception caused changes in equity risk premiums.

In today's marketplace, interest rate volatility is not as extreme as it was during the 1980s.[61] Nevertheless, changes in the perceived risk of bond investments relative to equity investments still drive changes in equity premiums and cannot be measured simply by observing nominal interest rates. Changes in nominal interest rates are heavily influenced by changes to inflation outlooks, which also change equity return expectations. As such, the relevant factor needed to explain changes in equity risk premiums is the relative changes between the risk of equity versus debt investments, and not simply changes in interest rates.

Importantly, Mr. Hevert's analysis simply ignores investment risk differentials. He bases his adjustment to the equity risk premium exclusively on changes in nominal interest rates. This is a flawed methodology that does not produce accurate or reliable risk premium estimates.

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[60]"Robert S. Harris and Felicia C. Marston, "The Market Risk Premium: "Expectational Estimates Using Analysts' Forecasts," *Journal of Applied Finance*, Volume 11, No. 1, 2001 at 10-13; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, "The Risk Premium Approach to Measuring a Utility's Cost of Equity," *Financial Management*, Spring 1985 at 42-43.

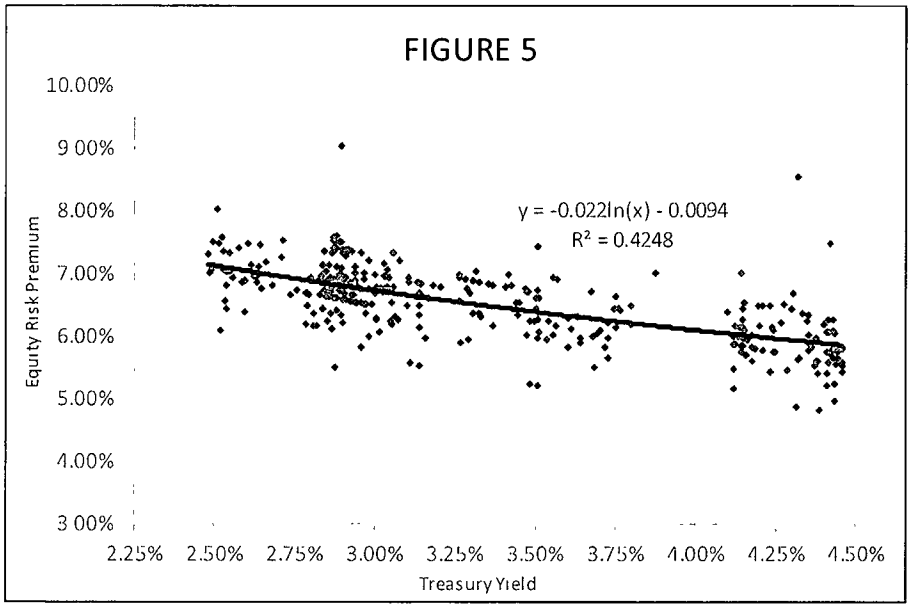
[61]Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, "The Risk Premium Approach to Measuring a Utility's Cost of Equity," *Financial Management*, Spring 1985 at 44.

Q DO YOU BELIEVE THE RELATIONSHIP SHOWN IN MR. HEVERT'S REGRESSION ANALYSIS IS APPLICABLE TO THE CURRENT CAPITAL MARKET ENVIRONMENT?

A No. The strength of a relationship between the dependent variable (risk premium) and the independent variable (nominal interest rates) in a regression analysis is most notably explained in the R-squared value. The R-squared value measures how much explanatory power the independent variable has on the dependent variable. A higher value indicates a stronger relationship.

As shown on Mr. Hevert's Exhibit RBH-5 the R-squared value is 74% when measuring the time period from January 1980 through January 2019. However, as shown below in Figure 5, when only measuring the relationship between the risk premium and interest rates over the 2010 through January 2019 post-recession time period, the R-squared measure declines to 42.48%.

A declining R-squared indicates a weakening of the statistical predictability produced from these regression studies. As such, the more recent period seems to support the academic and practitioner understanding that equity risk premiums are impacted by investment risk differentials and not simply changes in interest rates. This weakening of the statistical test of the accuracy of Mr. Hevert's regression study supports this widely accepted outlook. For these reasons, Mr. Hevert's belief that equity risk premiums can be gauged by only changes in interest rates is simply not supported by his own regression studies, as well as consensus outlooks by academics and market practitioners.



Q DO YOU HAVE ANY OTHER COMMENTS CONCERNING MR. HEVERT'S BYP RISK PREMIUM METHODOLOGY?

A Yes. Mr. Hevert's use of a long-term projected bond yield of 4.05%[62] does not reflect market participants' outlooks for CEHE's cost of capital during the period rates determined in this proceeding will be in effect. This bond yield is largely based on projections of Treasury bond yields five to 10 years out. Those projections are highly uncertain and in any event do not reflect the cost of capital in the test period or even the period over the next two to three years, the period in which rates determined in this proceeding will largely be in effect. As such, the risk premium methodology should be based on observable bond yields in the market today, or at most reflect bond yield projections over the next two to three years, the rate-effective period in this case.

[62]Exhibit RBH-6.

Q CAN MR. HEVERT'S BYP RISK PREMIUM ANALYSIS BE REVISED TO REFLECT CURRENT PROJECTIONS OF TREASURY YIELDS?

A Yes. Mr. Hevert's simplistic and incomplete notion that equity risk premiums change only with changes to nominal interest rates should be rejected. Adding my weighted average equity risk premium over Treasury bonds of 6.1%, as described above, to his Treasury yields of 3.03% and 3.33%, produces a BYP result of 9.13% to 9.43%.

IV.E. Hevert Expected Earnings Analysis

Q PLEASE DESCRIBE MR. HEVERT'S EXPECTED EARNINGS ANALYSIS.

A Mr. Hevert's Expected Earnings analysis is based on the projected returns on book equity for the electric utility companies followed by *Value Line* and included in his proxy group as developed on her Exhibit RBH-6. Based on this analysis, Mr. Hevert concluded that the average and median return on equity results for his proxy group are 10.27% and 10.26%, respectively, for the projected period 2021-2023.

Q PLEASE DESCRIBE THE PROBLEMS WITH MR. HEVERT'S EXPECTED EARNINGS ANALYSIS.

A Mr. Hevert's Expected Earnings analysis should be rejected because this approach does not measure the market required return appropriate for the investment risk of CEHE. Rather, it measures the book accounting return. The market required return is not the same as the accounting return, and the two can be – and in this instance are – vastly different.

The significant discrepancy between the level and meaning of a market-required return and a book return on equity, can have significant implications to both investors and customers, when used to set a fair return on equity for ratemaking

purposes. Simply stated, a market return provides a pure measure of fair compensation to investors, and allows for setting rates that provide no more than fair compensation. Conversely, using the earned return on book equity can cause compensation to be either too high or too low, and rates to be set either too low or too high, depending on the specific circumstances when the book return is measured.

For example, if the proxy group's earned return on book equity is lower than the market return, then this could be an indication that the rates for the proxy group are too low and not providing fair compensation. As such, the measured book return on equity would be an indication rates need to be increased. However, if the earned return on book equity was used to estimate a fair return for ratemaking purposes, then this depressed earnings level could result in rates being set below a level that provides fair compensation to investors, and may not support the utility's financial integrity. Conversely, if the earned return on book equity for the proxy companies is above a fair market return on equity, then that could be an indication that the rates for the proxy companies produce more earnings than necessary to fairly compensate investors, and using this inflated return on equity would result in rates which are not just and reasonable for customers. In other words, the market return on equity is an indication of whether or not earnings are fair and reasonable, whereas the book return on equity generally is used to determine whether or not rate revenues for utilities are either too high or too low. They cannot be used interchangeably.

The market-required return is a long-standing practice in setting rates for utility companies. This is because the market sets the required rate of return for assuming the risk of an investment. To the extent the utility's earnings are adequate to allow it to attract investors, then it will be able to sell new equity shares to the market to secure capital needed to fund additional rate base investments. If this long-standing practice of setting authorized returns consistent with market returns is rejected, in favor of

Mr. Hevert's proposal to look at book returns on equity, then the balance between estimating a fair return that is fair to both investors and customers will be turned upside down, and the rate-setting practice could be substantially impaired and would not be reliable.

The earned return on book equity is simply not an accurate or legitimate basis upon which to determine what a fair and reasonable return on equity for both investors and customers would be in setting rates. A fair return on equity needs to be a return that represents fair compensation to utility investors, but results in rate impacts on customers that are no more than necessary to produce that fair compensation – except to the extent greater earnings are necessary to maintain financial integrity or credit standing. For these reasons, this methodology simply should be rejected.

IV.F. Flotation Costs

Q DO YOU TAKE ISSUE WITH MR. HEVERT'S FLOTATION COST ADJUSTMENT?

A Yes, I do. Mr. Hevert estimated a 9 basis points flotation cost adjustment.[63] Mr. Hevert does not include an explicit flotation cost adjustment but he considers it along with CEHE's additional business risks in determining where CEHE's return on equity falls within the range of results.

This flotation cost adjustment is intended to recover the actual cost a utility incurs by issuing additional stock to the public. However, Mr. Hevert develops his flotation cost as the difference between the unadjusted DCF result and the DCF result adjusted for flotation cost. His flotation cost calculation is based on his proxy group companies.

[63]Hevert Direct at 38-42.

Q WHY IS THE FLOTATION COST ADJUSTMENT NOT REASONABLE?

A The flotation cost adjustment is not based on the recovery of prudent and verifiable actual flotation costs incurred by CEHE. As shown on Exhibit RBH-7 of Mr. Hevert's direct testimony, he derives a flotation cost adder based on other utility companies. Because he does not show that his adjustment is based on CEHE's actual and verifiable flotation expenses, there are no means of verifying whether Mr. Hevert's proposal is reasonable or appropriate. Stated differently, Mr. Hevert's flotation cost return on equity adder is not based on known and measurable CEHE costs. Therefore, the Commission should reject a flotation cost return on equity adder for CEHE.

IV.G. Additional Risks

Q DID MR. HEVERT CONSIDER ADDITIONAL BUSINESS RISKS TO JUSTIFY A RETURN ON EQUITY WITHIN HIS RANGE?

A Mr. Hevert believes that CEHE is exposed to several additional risks that should be accounted for: (1) CEHE's customer concentration (2) CEHE's geographic and weather-related risks, and (3) regulatory mechanisms and capital spending.[64] Mr. Hevert believes that these additional risks should be considered in determining the return on equity for CEHE.

Q WHY DO YOU BELIEVE THAT CEHE FACES RISKS THAT ARE COMPARABLE TO THE RISKS FACED BY MR. HEVERT'S AND YOUR PROXY GROUP COMPANIES?

A The major business risks identified by Mr. Hevert are considered in the assigning of a credit rating by the various credit rating agencies. Indeed, as referenced above, in

[64]Hevert Direct at 42-52.

assessing CEHE's investment risk, credit rating agencies specifically note its affiliation risk with its parent company in the midst of leveraged acquisitions of other utilities, its capital investment risk, and the impact on cash flow due to the change in tax law. Further, the credit rating agencies are also well aware of the storm damage risks that CEHE and other Gulf Coast and Florida utilities have assumed over the last ten years. This risk, as suggested by Mr. Hevert, has been considered by Texas in allowing utilities to mitigate this cost recovery risk, through use of securitization bonds, which both provide a utility full cost recovery of storm damage costs and mitigates the price to customers to provide the utility full compensation of these damage costs.

As shown on my Exhibit MPG-7, the average S&P credit rating for my proxy group of BBB+ is identical to CEHE's credit rating from S&P. The relative risks discussed on pages 42-52 of Mr. Hevert's testimony are already incorporated in the credit ratings of the proxy group companies. S&P and other credit rating agencies go through great detail in assessing a utility's business risk and financial risk in order to evaluate their assessment of its total investment risk. This total investment risk assessment of CEHE, in comparison to a proxy group, is fully absorbed into the market's perception of CEHE's risk, and therefore the proxy group fully captures the investment risk of CEHE.

Q HOW DOES S&P ASSIGN CORPORATE CREDIT RATINGS FOR REGULATED UTILITIES?

A In assigning corporate credit ratings, the credit rating agency considers both business and financial risks. Business risks, among others, include a company's size, competitive position, generation portfolio, and capital expenditure programs, as well as consideration of the regulatory environment, current state of the industry, and the economy as whole. Specifically, S&P states:

> To determine the assessment for a corporate issuer's business risk profile, the criteria combine our assessments of industry risk, country risk, and competitive position. Cash flow/leverage analysis determines a company's financial risk profile assessment. The analysis then combines the corporate issuer's business risk profile assessment and its financial risk profile assessment to determine its anchor. In general, the analysis weighs the business risk profile more heavily for investment-grade anchors, while the financial risk profile carries more weight for speculative-grade anchors.[65]

Q DO CEHE'S CAPITAL EXPENDITURE FORECASTS PRESENT RISKS THAT ARE OUT OF LINE WITH THE UTILITY INDUSTRY?

A No. As shown on my Exhibit MPG-2, currently the industry as a whole is expected to require access to the external capital markets due to producing less cash flow per share than capital spending per share. Importantly, this is expected to change in the three- to five-year period. As can be seen on that exhibit, the industry is expected to produce more internal cash relative to projected capital expenditures during the 2021-2023 time period. Hence, Mr. Hevert's assertion that CEHE will need to access the capital markets in the near term is not unique to CEHE.

Q DO YOU HAVE ANY COMMENTS CONCERNING MR. HEVERT'S CONCLUSIONS ABOUT THE IMPACT OF THE TAX CUTS AND JOBS ACT ("TCJA")?

A Yes. As outlined above, the change in federal tax law will have a negative impact on CEHE's cash flows. However, the cash flows outlook after the change in tax law, and reflecting the large capital program, are adequate to maintain CEHE's bond rating at a stable level with the ability to improve over time as it works through the ratemaking issues around the change in tax law (amortization of excess accumulated deferred income tax ("ADIT")) and moves through an abnormally large capital expenditure time

[65]Standard & Poor's RatingsDirect: "Criteria/Corporates/General: Corporate Methodology," November 19, 2013.

period. These tax law changes, and the impact on cash flows are fully reflected in CEHE's bond rating which indicates the proxy group has fully measured this investment risk and produces a return on equity fair for CEHE without external adders as a result of market-based models.

Q DID MR. HEVERT ALSO OFFER AN ASSESSMENT OF CURRENT MARKET CONDITIONS IN SUPPORT OF HIS RECOMMENDED RETURN ON EQUITY RANGE?

A Yes. Mr. Hevert observes a few factors that he believes gauge the capital market environment and investor sentiment, including the relationship between the Federal Reserve's monetary policy and market volatility, measured by the CBOE Volatility Index, known as the VIX, as well as an assessment of the yield curve.[66] He concludes that these metrics indicate that the constant growth DCF results should be given less weight than the risk premium models and that investors are betting on rising long-term rates.[67]

Q DO YOU BELIEVE THAT MR. HEVERT'S USE OF THESE MARKET SENTIMENTS SUPPORTS HIS FINDINGS THAT CEHE'S MARKET COST OF EQUITY IS CURRENTLY IN THE RANGE OF 10.00% TO 10.75%?

A No. In many instances, Mr. Hevert's analysis simply ignores market sentiments favorable toward utility companies and instead lumps utility investments in with general corporate investments. A fair analysis of utility securities shows the market generally regards utility securities as low-risk investment instruments and supports the finding that utilities' cost of capital is very low in today's marketplace.

[66]Hevert Direct at 8-20.
[67]*Id.* at 9.

Q WHAT IS THE MARKET SENTIMENT FOR UTILITY INVESTMENTS?

A I briefly responded to Mr. Hevert's assertions above. Currently, the market sentiment toward utility investments, rather than just general corporate investments, is that the market is placing high value on utility securities, recognizing their low risk and stable characteristics.

This is illustrated by current utility bond yield spreads as discussed at length previously. The current strong utility bond valuation is an indication of the market's sentiment that utility bonds are lower risk and are generally regarded as a safe haven by the investment industry.

Further, other measures of utility stock valuations also support the conclusion that there is a robust market for utility stocks. As shown on my Exhibit MPG-2, financial valuation measures – *e.g.*, P/E ratio and market price to cash flow ratio – show that utility stock valuation measures are robust.

For all these reasons, direct assessments of valuation measures and market sentiment toward utility securities support the credit rating agencies' findings, as quoted above, that the utility industry is largely regarded as a low-risk, safe haven investment. All of this supports my finding that utilities' market cost of equity is very low in today's very low-cost capital market environment.

Q DO YOU HAVE ANY COMMENTS CONCERNING MR. HEVERT'S CONTENTION THAT INTEREST RATES ARE GOING TO INCREASE?

A Yes. Mr. Hevert develops his risk premium studies mainly relying on near-term and long-term projected interest rates, which he believes are expected to increase.[68]

[68] *Id.* at 12.

Mr. Hevert's primary reliance on forecasted Treasury bond yields is unreasonable because he is not considering the highly likely outcome that current observable interest rates will prevail during the period in which rates determined in this proceeding will be in effect. This is important because, while current observable interest rates are actual market data that provides a measure of the current cost of capital, the accuracy of forecasted interest rates is problematic at best.

Q WHY DO YOU BELIEVE THAT THE ACCURACY OF FORECASTED INTEREST RATES IS HIGHLY PROBLEMATIC?

A Over the last several years, observable current interest rates have been a more accurate predictor of future interest rates than economists' consensus projections. Exhibit MPG-24 illustrates this point. On this exhibit, under Columns 1 and 2, I show the actual market yield for Treasury bonds at the time a projection is made, and the corresponding projection for Treasury bond yields two years in the future, respectively.

As shown in Columns 1 and 2, over the last several years, Treasury yields were projected to increase relative to the actual Treasury yields at the time of the projection. In Column 4, I show what the Treasury yield actually turned out to be two years after the forecast. In Column 5, I show the actual yield change at the time of the projections relative to the projected yield change.

As shown in this exhibit, economists have consistently been projecting that interest rates will increase over the near term. However, as shown in Column 5, those yield projections have turned out to be overstated in almost every case. Indeed, actual Treasury yields have decreased or remained flat over the last several years rather than increasing as the economists' projections indicated. As such, current observable interest rates are just as likely to accurately predict future interest rates as are economists' projections.

Q DO YOU HAVE ANY FURTHER COMMENTS ON MR. HEVERT'S INTEREST RATE PROJECTIONS?

A Yes. First, it is simply not known how much, if any, long-term interest rates will increase from current levels or whether they have already fully accounted for the termination of the Fed's QE program and the increase in the Federal Funds Rate. Nevertheless, I do agree that this Fed program introduced risk or uncertainty in short-term interest rate markets. However, the increase in short-term interest rates had no impact on longer-term yields. In fact, as the EEI pointed out: "Interest rates would likely fall if economic data turns weak, as they did in Q4."[69] This notion is also supported by the president of the Saint Louis Federal Reserve, who stated that even though the short-term interest rates have increased the longer-term yields remain at historically low levels, which is referred to as "flattening" of the yield curve."[70]

Second, I would note CEHE is largely shielded from significant changes in capital market costs. To the extent long-term interest rates ultimately increase above current levels, which may have an impact on required returns on common equity, at that point in time, CEHE, like all other utilities, can file to change rates to restate its authorized rate of return at the prevailing market levels.

Finally, while current observable interest rates are actual market data that provide a measure of the current cost of capital, the accuracy of forecasted interest rates is problematic at best.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

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[69] *EEI Q4, 2018 Financial Update:* "Stock Performance" at 6.
[70] Assessing the Risk of Yield Curve Inversion: An Update, July 20, 2018.

Qualifications of Michael P. Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation and a Managing Principal with the firm of Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A In 1983 I received a Bachelor of Science Degree in Electrical Engineering from Southern Illinois University, and in 1986, I received a Master's Degree in Business Administration with a concentration in Finance from the University of Illinois at Springfield. I have also completed several graduate level economics courses.

In August of 1983, I accepted an analyst position with the Illinois Commerce Commission ("ICC"). In this position, I performed a variety of analyses for both formal and informal investigations before the ICC, including: marginal cost of energy, central dispatch, avoided cost of energy, annual system production costs, and working capital. In October of 1986, I was promoted to the position of Senior Analyst. In this position, I assumed the additional responsibilities of technical leader on projects, and my areas of responsibility were expanded to include utility financial modeling and financial analyses.

In 1987, I was promoted to Director of the Financial Analysis Department. In this position, I was responsible for all financial analyses conducted by the Staff. Among other things, I conducted analyses and sponsored testimony before the ICC on rate of return, financial integrity, financial modeling and related issues. I also supervised the development of all Staff analyses and testimony on these same issues. In addition, I supervised the Staff's review and recommendations to the Commission concerning utility plans to issue debt and equity securities.

In August of 1989, I accepted a position with Merrill-Lynch as a financial consultant. After receiving all required securities licenses, I worked with individual investors and small businesses in evaluating and selecting investments suitable to their requirements.

In September of 1990, I accepted a position with Drazen-Brubaker & Associates, Inc. ("DBA"). In April 1995, the firm of Brubaker & Associates, Inc. was formed. It includes most of the former DBA principals and Staff. Since 1990, I have performed various analyses and sponsored testimony on cost of capital, cost/benefits of utility mergers and acquisitions, utility reorganizations, level of operating expenses and rate base, cost of service studies, and analyses relating to industrial jobs and economic development. I also participated in a study used to revise the financial policy for the municipal utility in Kansas City, Kansas.

At BAI, I also have extensive experience working with large energy users to distribute and critically evaluate responses to requests for proposals ("RFPs") for electric, steam, and gas energy supply from competitive energy suppliers. These analyses include the evaluation of gas supply and delivery charges, cogeneration and/or combined cycle unit feasibility studies, and the evaluation of third-party asset/supply management agreements. I have participated in rate cases on rate

design and class cost of service for electric, natural gas, water and wastewater utilities. I have also analyzed commodity pricing indices and forward pricing methods for third party supply agreements, and have also conducted regional electric market price forecasts.

In addition to our main office in St. Louis, the firm also has branch offices in Phoenix, Arizona and Corpus Christi, Texas.

Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

A Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of service and other issues before the Federal Energy Regulatory Commission and numerous state regulatory commissions including: Arkansas, Arizona, California, Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Mississippi, Missouri, Montana, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, and before the provincial regulatory boards in Alberta and Nova Scotia, Canada. I have also sponsored testimony before the Board of Public Utilities in Kansas City, Kansas; presented rate setting position reports to the regulatory board of the municipal utility in Austin, Texas, and Salt River Project, Arizona, on behalf of industrial customers; and negotiated rate disputes for industrial customers of the Municipal Electric Authority of Georgia in the LaGrange, Georgia district.